SANDOW'S MAGAZINE

OF PHYSICAL CULTURE.

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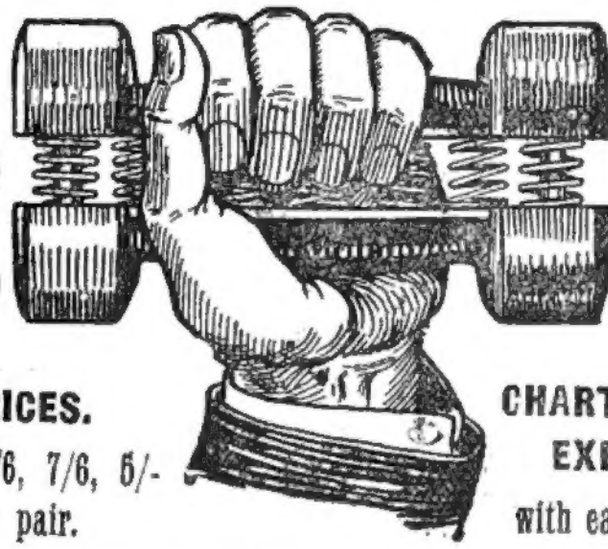

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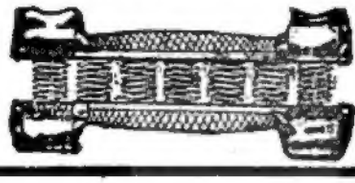

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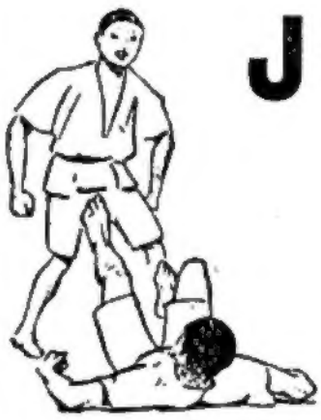

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SANDOW'S MAGAZINE

...OF...

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EDITOR: EUGEN SANDOW.
Assistant Editor: FRANK PINK.

MOTTO:—*Mens Sana in Corpore Sano*—A SOUND MIND IN A SOUND BODY.

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NOTES FROM MY NOTE-BOOK.

BY THE EDITOR.

I RECENTLY suggested in these Notes the advisability of football, harrier, and outdoor sports clubs generally devoting at least one evening a week to physical culture. As a result of that hint to my readers, I am pleased to say that I have already received numerous replies from the secretaries of many such organisations in all parts of the country, stating that they have already adopted or are about to adopt my recommendation. I have not the slightest hesitation in declaring that in any sport requiring stamina and strength, the value of a carefully selected course of physical culture cannot be overestimated. I have in my possession hundreds of letters from runners, footballers, swimmers, cricketers, and others, all testifying to the improvement of their form after going through what they are pleased to style, "A course of Sandow."

SPEAKING of cricket, by the way, reminds me that many enthusiastic cricketers, like many enthusiastic cyclists, give up all exercise during the winter. Nothing could be more dangerous than to suspend active exercise in this fashion. Apart from the actual injury done to the system, too, there must also be taken into consideration the difficulty of "getting fit" when spring comes round once more. Cricketers and cyclists will find it much more sensible to keep in fair condition during the winter by the use of the dumbbells and the developer than to completely abstain from exercise. In fact, I think it would be a good thing if athletic, cricket, and cycling clubs were, during the winter months, to resolve themselves into physical culture clubs, as a well known Leicester cricket club has just done.

TRAINERS especially will, I am sure, realise the importance of adopting such a sensible policy as this. During the winter months many young athletes are not only apt to get out of condition, but, freed from the necessities of strict training, and miss-

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ing the society of their fellow clubmen in the evenings formerly spent in the pavilion, they often succumb to evil habits and vicious ways. The saloon and the music-hall offer alluring traps, and the result is that after passing from one excess to another, many a promising youth is lost to fame. I know one trainer who regards his charges with an almost paternal affection, and he told me that some of his most flattering tyros have utterly ruined their future in this way. He subsequently acted on my advice, formed a physical culture club for the members during the winter, and the result, he has informed me, has been most satisfactory. The club has not only retained its active members during the year, but in nearly every case, the youths have shown vastly enhanced form during the following athletic season.

I HAVE just seen the annual report of the Education Committee of the London County Council, and it contains much interesting information and many useful comments on physical training by the appointed organisers of physical exercises. Teachers are enjoined to distinguish between physical training and physical education. Mere dull, uninteresting physical movements will be of little value. It is by pleasantly imparted knowledge of how best the body may be healthily developed to good looking vigour, and by pleasant inspiriting exercises that the growing generation may be brought to maturity physically—and that generally means morally—fit. One instructor refers especially to the unhygienic tight clothing of the elder girls. Physical education—not mere exercises—will teach them the folly of their ways. It is, too, of the utmost importance that the instructors themselves are thoroughly competent for the duty they have to perform.

NOR will it be of little value if the children are to receive their training so long as they are compelled to attend insanitary or ill-ventilated schools. But it seems that the London County Council are not using this necessary precaution even in the training of teachers themselves. His Majesty's Inspector on the Council's London Day Training College in a recent report says that the accommodation provided by the premises is little enough, and in one particular, the hall in which the women students take physical exercises, needs immediate attention. This is an ill-ventilated room, into which percolate on all but windy days the odours from the adjacent refectory. "Physical exercises" taken here, when the women, already tired, need all the fresh air they can get, are hardly worth having. The provision for school practice needs careful re-construction. This does not sound altogether encouraging, but time will show.

THE fact remains, however, that we shall never see a great national physical regeneration until people realise the absolute importance of individual interest in this matter. I should like to see every man, woman, and child devoting some portions of every day to bodily care and training. I want them to realise that their bodies were given them to be respected and cared for, and not to be despised and neglected. Even in the matter of the daily bath, I venture to say that if a census of the number of daily bathers in this country were taken, the figures would be out of all proportion to the general census of the population. Then, again, notwithstanding all the undoubted increase in the popularity of physical culture in recent years, the number of those who voluntarily devote a few minutes daily to bodily exercise is still a very small minority of the whole people of this great Empire. This, of course, is mainly the result of want of early education in this direction, and perhaps after physical education has become a recognised feature in every school, the ingrained youthful training will found the habit of daily exercise for life.

DIET FADDISTS.

AMATEUR doctoring and drugging have done untold harm, but the fashion for amateur dieting, which is one of the manias of the day, is running it very close in mischief-making.—Florence Stacpoole, in *The Queen*.

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IS EARLY RISING DESIRABLE?

"Only the lower animals go to bed and get up with the sun," says an American author.

THE delightful Elia, who is the closest personal friend one may find in all literature, exposed certain fallacies once and for all to the satisfaction of those whimsically inclined. However, since not all minds have the whimsical turn, the fallacies continue to bob up from time to time with a vitality that is suspiciously Antæan.

Consider the proverb: "Early to bed and early to rise, makes a man healthy, wealthy and wise." Any schoolboy will tell you that this is not so; and yet the fallacious statement persists — parents still preach it; aged money-makers explain their success by it.

"The very early riser" says an American writer, "is usually an opinionated individual, and it is likely that his habit of early rising is his only claim to distinction. More poetry has been written about eventide than the dawn. This is quite conclusive, for poets are sensible folk and not much given to the folly of early rising.

"Some good literary work has been done in the early hours, but this is exceptional. Sir Walter Scott, it is said, wrote the most of his romances before breakfast; but a multitude of authors have produced immortal works by the light of the midnight oil without smelling of it.

WILSON DENOUNCED THEM.

"Early risers descant rapturously upon the delicious freshness of the morning air and other delights which it is reported can be enjoyed about sunrise, against which may be offset the loveliness of the dying day, the deepening shadows of the twilight, and the charm of moonlight. The glories of the dawn rest in rumour only to the most of us, and must be taken on faith. The suffrages of the majority are for the sunset, and the majority rules in the Republic.

"John Wesley wrote an excellent sermon on early rising. Doddridge took pride in the fact that he was at work at five in the morning; but the famous Doctor Wilson (Christopher North) scouted the whole brood of sunrise workers in a lengthy essay, which is the comfort and solace of all lazy and normal people.

"Wilson refused to take it for granted that early rising is a virtuous habit, or that early risers are a particularly meritorious set.

"'I object to both clauses of the bill,' says the courageous dissenter. 'Early risers are generally milksop spoonies, ninnies with broad, unmeaning faces and groset eyes, cheeks odiously rosy, and with great calves to their legs.'

ONE OF PRIMITIVE MAN'S HABITS.

"This indictment was written in Scotland. Matters may not be quite so disgraceful here. Wilson questioned the motives of his fellow countrymen who sally forth at an impossibly early hour, and suggested that their ambition is merely to get an omniverous appetite for breakfast.

"'Let no knavish prig purse up his mouth and erect his head when he meets an acquaintance who goes to bed and rises at a gentlemanly hour.'

"The lower orders of creation go to bed and rise with the sun. Primitive man probably had this vicious habit. Civilisation has gradually reduced the ranks of early risers to the healthy and vigorous persons who purvey ice and milk with much clatter when they ought to be abed.

SOUR MILK AND OLD AGES.

A New York physician travelling on the continent of Europe was surprised to see in some sections old men working beside young men. He approached one old man and inquired his age. The reply was a startling one. "One hundred and ten years of age." Upon making inquiries from local physicians he was assured that the remarkable physical condition of the old inhabitants was chiefly due to their habits of drinking freely of sour milk.

ORIGIN OF POPULAR GAMES.

FEW nations are able to boast of such a great variety of games as are played in Great Britain and the United States. In many cases the Anglo-Saxon has been responsible for the preservation of games which are now almost unknown in the countries in which they had their origin. Some of these forms of diversion are older than the Roman Empire, while others, like ping-pong and basket-ball, are of recent invention.

BASEBALL holds undisputed sway as the American national game. It is founded on the old English game of rounders, and for almost a century it has been known in the Eastern States in various forms.

BASKET-BALL is unique, inasmuch as it was the invention of one man, and was completed at a single sitting. In 1891, in the course of a lecture at the Young Men's Christian Association in Plainfield, Massachusetts, the lecturer spoke of the mental processes of invention, and used a game, with its limitations and necessities, as an illustration. James Naismith, who was a member of the class, worked out basket-ball that same night as an ideal game to meet the case. It was presented the next day in the lecture-room and put in practice with the aid of the members of the gymnasium. From there it spread to other branches of the Young Men's Christian Association and subsequently to athletic clubs and the general public.

BILLIARDS is believed by some to have been brought from the East by the Crusaders, while others claim an English origin for it and find it allied to the game of bowls. Still others assert that the French developed it from an ancient German game. It seems pretty certain that the first person to give form and rule to the game was an artist, named Henrique Devigne, who lived in the reign of Charles IX. One writer sees in billiards the ancient game of paille-maille, played on a table instead of on the ground, and this is indeed a very reasonable assumption.

BOWLS, or bowling, is one of the most popular and ancient of English pastimes, its origin being traceable to the twelfth century. It was held in such disfavour for years that laws were enacted against it and it was an illegal pursuit. Alleys were built, however, as it could not be played out-of-doors during the winter, and the game flourished in spite of opposition. In the beginning of the eighteenth century greens began to increase, while the alleys were rigorously and absolutely suppressed. It soon became a royal game, and no gentleman's place was complete without a bowling-green.

CHECKERS is said by some to be a very old game, while others declare it to be of comparatively modern origin. Whence it came is absolutely unknown. The game is also called draughts, and there are many varieties of it—Chinese, English, Polish, Spanish, Italian, and Turkish. It is also found among the native tribes of the interior of New Zealand.

CHESS always has been the subject of more dispute, so far as its origin is concerned, than any other game. It is probably the most ancient as well as the most intellectual of games, and it is played all over the world. The belief which is most generally accepted is that it came from the Hindoos, and the most conservative estimate places its age at one thousand years. Some persons, however, claim an age of from four to five thousand years for it. Its basis is the art of war, and the Hindoo name for it, *chaturanga*, means the four "angas" or members of an army which are given in Hindoo writings as elephants, horses, chariots, and foot-soldiers.

CRICKET is the national game of Englishmen, and seems always to have been played in Britain. The first mention of it is to be found in a manuscript of the thirteenth century. The

name comes from the Saxon *cric* or *cryc*, a crooked stick—an obvious reference to the bat with which it is played. Wherever the English have colonised, the game is played, and in many of the British possessions it has become popular with the natives, notably in New Zealand.

CROQUET is said to have been derived from paille-maille, or mall, which was played in Languedoc in the thirteenth century. Mall was very popular in England at the time of the Stuarts. No other game has had such fluctuations of fortune as croquet, as it sunk into oblivion by the end of the eighteenth century, yet was revived during the middle of the nineteenth, and assumed almost the popularity of a national game.

CURLING has been popular in North Britain for the last three centuries, and is regarded as a Scottish game. It is possible that some of the Flemish merchants brought it into the country toward the close of the sixteenth century, but however that may be, it owes its development to the Scotch, and is now decidedly the national game of Scotland.

DICE are said by some to have had their origin in occult sources, but more reasonably they are ascribed to Psalmedes, of Greece, B.C., 1244. Those exhumed at Thebes are identical with those used to-day, and the games played with them are the simplest and most widely known games of chance in the world.

FOOTBALL was undoubtedly introduced into England by the Romans, and is, therefore, older than the national game of cricket. Varieties of it may be found in many parts of the world. It is known in the Philippines and through the Polynesian Islands, among the Eskimos, the Faroe Islands, and even by the Maoris of New Zealand. The Greeks also played it.

GOLF is popularly supposed to have had its origin in Scotland, but there seems to be good reason for believing that it came from Holland. The name itself is undoubtedly of German or Dutch extraction, and an enactment of James I. of England, bearing date 1618, refers to a considerable importation of golf-balls from Holland, and at the same time places a restriction upon this extravagant use, in a foreign country, of the coin of the realm.

LACROSSE is the national ball-game of Canada. It came from the aboriginal red men, who doubtless played it for many centuries before the discovery of the New World. Different tribes played it in different ways, and it was usually very rough. The name was given to it by the French Canadians, who saw the resemblance between the curved netted stick used in playing it and a bishop's crozier or *crosse*.

PING-PONG is really table-tennis, and had its origin in that game. Its immense popularity lasted only a brief space of time, and its greatest vogue was in France and America.

POLO is of Eastern origin, and has been a favourite pastime in Persia, Tartary, and the frontiers of India from prehistoric times. The name of the game varies with the district, and the rules are not the same on minor points, though they are substantially alike on the main issues. China and Japan also have a game closely resembling the Persian sport.

POOL and PYRAMIDS are both a form of billiards, and their origin from the same source is apparent.

SHUFFLEBOARD probably comes from the same source as quoits, curling, and bowling. It was immensely popular in England during the reign of Henry VIII. Subsequently it was one of the games forbidden by law because it turned the people from the practise of archery.

TENNIS is pronounced the oldest of all the existing ball-games. It is impossible to give its origin, but it was played in Europe during the Middle Ages, in the parks or ditches of the feudal castles. It was at first the pastime of kings and nobles, but later it grew popular with all classes. The French took it from the Italians and the English from the French.

WHIST undoubtedly is derived from the old game of trumps, which has a purely English lineage. There is no record of the origin of this game nor of its development into ruff and honours, which was the parent of whist. The earliest reference to it is believed to be in a sermon of Latimer's, about the year 1529. The name probably is derived from the "hist" or "silence" which close attention to play demands of the players.

A STUDY OF THE MOUTH.

Its Important Influence on Health.

THE mouth has the greatest diversity of uses of any organ which man possesses. It is the organ of articulate speech by which man communicates with his fellow men. It is the organ by which expression is given to all thoughts, emotions, and passions of man. It is the organ through which the orator sways his audience, or the sweet singer touches the tender chords of sympathy, as he gives expression to pleasing strains of music.

It is the organ by which all food and nutrition is received into the body. It contains the organs of mastication and insalivation, by which the food is disintegrated and moistened, which forms the first and most important step in the process of digestion and assimilation. It is the one organ which is absolutely necessary for our existence.

It is to be regretted that, while it is so essential to our existence, it is also the gateway to those toxic conditions which so frequently end our days.

THE LYMPHATIC GLANDS OF THE MOUTH.

To properly understand the infectious condition of the mouth, and how it is transmitted to the general system, the anatomy of the lymphatics must first be considered.

Dr. George B. Wood, M.D., who has given much experimental study to the lymphatics of the mouth, tonsils, and nasal passages, finds that the gums and mucous membrane of the mouth are abundantly supplied with lymphatic glands, capable of draining mouth infection rapidly into the system. He states that one of the three most important sources of infection is the gums, supplied, as they are, with a rich network of lymphatics.

THE MOUTH AN AVENUE OF INFECTION.

Many people, says the *Healthy Home*, of exceptionally cleanly habits, are not aware of the adaptability of the mouth to become infected, but when we stop to think of the sources in which dangerous bacteria easily gain access to the mouth, we are no longer surprised. The following are a few of the common sources through which bacteria are carried: the air which we breathe; the food which we eat, taken from unclean fingers; water which we drink from a foul glass or cup; or the placing of foreign bodies carelessly in the mouth, such as paper money, which is often held in the mouth while making exchange, after it has passed through many unclean hands.

Dr. Harrington and Dr. Monk, after careful research, express the opinion that the mouth is a singularly unclean place, as its secretions are richer in bacteria than the foulest sewage.

Dr. Levings, in an interesting paper on "Stomatology," gives many definite and interesting conditions of the mouth. He says that the bacteriology of the mouth plays an important *rôle* as the local manifestations of many constitutional diseases, such as influenza, diphtheria, smallpox, measles, scarlet fever and tuberculosis. There are also other pathological or diseased conditions which occur in the mouth and adjoining bones. Many of these are due to micro-organisms detrimental to health. Among these may be mentioned osteomyelitis, thrush, anthrax, erysipelas, ulcerative and gangrenous stomatitis, pyorrhea alveolis, and caries of the teeth. All these conditions are accompanied with many dangerous micro-organisms. Death has occurred from a most virulent pyrogenic infection following the extraction of teeth.

The natural warmth and moisture of the mouth, as well as the organic matter present, make it a most favourable place for the growth of bacteria. Many series of investigations have been carried on by scientific men, with the results which can be summarised under five classes. The first class included clean mouths; the

second, ordinarily kept mouths; the third, filthy mouths; fourth, tobacco chewer's mouths; and fifth, mouths in which there were distinct pathological processes.

From the examination of the first four groups, one hundred swabs were taken from different individuals, dividing them as equally as possible, into the different groups. The first twenty swabs were taken from mouths sweet and clean, and in which the teeth were well preserved and clean. These swabs were washed in a normal saline solution, which was used for further study. Micrococci were found in all the mouths examined. The most frequent were staphylococci, which were present in all the cases. The micrococcus tetrogenus was found in fifteen cases, while in six cases the sarcinæ were found.

THE ORDINARY MOUTH.

In this class the organisms were much more numerous. This was especially marked where putrefactive matter was present in cavities of decayed teeth.

FILTHY MOUTHS.

In the majority of these cases pathological conditions were present, such as decayed teeth, suppurating gums, or small ulcers. In all these filthy mouths millions of bacteria were present, and a much larger per cent. were virulent.

TOBACCO CHEWER'S MOUTH.

An examination of these cases shows that the tobacco chewer's mouth is more filthy than the ordinary filthy mouth. Furthermore, the examination shows that tobacco has no restraining influence on the growth of bacteria. Most of the cases contained decayed teeth and suppurating processes about the teeth. It was not evident that tobacco was the cause of the decay, only that the individual was less careful about the care of the mouth. There were no new micro-organisms found in the tobacco chewer's mouth that were not found in the other mouths, only they were more abundant, as these mouths were less cared for. From the facts brought out by the investigations here related, it goes to show that the proper care of the mouth is essential to the health and well-being of all people.

THE CARE OF THE MOUTH.

All who have given attention to the septic or poisonous condition of the mouth, agree that it is one of the great roadways of infection, and that the necessity of giving more attention to oral or mouth cleanliness is one of the duties of life, if we would protect the general system from sources of infection.

Dr. Levings says that, to make the mouth reasonably clean, more must be done than to gargle the mouth. It must be scrubbed, so as to remove all particles of food from the teeth.

We have so far made it clear that the mouth is very rich in most dangerous micro-organisms. We also find from the experiments of Dr. Wood that the mucous membrane of the mouth, and especially of the gums, is very abundantly supplied with lymphatics, which readily take up and transfer infectious material from the mucous membrane of the mouth, and especially from the gums to the internal organs, particularly to the lungs.

Statistics will probably never reveal the great number of deaths which annually occur by the micro-organisms of a most dangerous type, which infects the mouth and their toxic products and are rapidly transported to the whole system by the activity of the lymphatics, with which the mucous membrane of the mouth is abundantly supplied.

DANGER OF THE TOOTH BRUSH.

Bearing in mind the conditions herein set forth, we are in a condition to consider the effect of the use of the tooth-brush. Constructed, as it is, of stiff, hard bristles, pointed enough to easily penetrate the mucous membrane of the gums, we vigorously brush the gums and lacerate them sufficiently to cause bleeding.

What then takes place? The mouth loaded with disease producing germs of a most virulent type, can find an open gateway through the punctured and lacerated mucous membrane of the gums, to the lymphatics, by which they easily invade the system. Furthermore, after the tooth brush has been used a few times, it becomes itself loaded with bacteria, and is a dangerously foul thing to put into the mouth.

ARTICLETTES.

THE HAIR.

THE expression regarding the effects of trouble that "it is enough to make one's hair turn gray" has, it is commonly claimed, been often verified. Now it appears that extreme mental emotion may completely scare out the hair. According to a Paris medical journal, a vigorous peasant with abundant hair, not yet showing gray, saw his small child trampled under a horse's hoofs and was overcome by fright. He trembled and had palpitations, and a feeling of cold and tension in the face and head. On the following day the hairs of the head, beard and eyebrows commenced to fall in quantities, so that after eight days he was absolutely bald. In a few weeks a new growth of hair put in an appearance.

CATARACT.

A CORRESPONDENT describes a simple method which enables a patient to see a cataract in his own eye and note its growth and development probably better than any oculist can observe it for him. The cause of cataract is the gradual deposition of oxalate of lime in the substance of the crystalline lens. It occurs at first in small spots or streaks, sometimes in one part and sometimes in another, gradually increasing until it penetrates the whole of the lens, causing blindness. The remedy is to remove the lens, and after its removal the patient needs a substitute in the form of highly magnifying spectacles. The method advocated to enable a person to follow the progress of the disease is to use a piece of card—a visiting card will do—and a needle. Pierce a clean, round hole near the middle of the card and hold the card up to the light, close to the eye, looking preferably in the direction of a piece of blue sky. With the card near to the eye the observer will not see the small hole pierced by the needle, but a comparatively large, faintly illuminated field, with his cataract projected upon it. He is, in fact, regarding the shadow cast by his cataract on the retina at the back of the eye. With a small puncture in the card the shadow so thrown is comparatively sharp. But with a normal eye an evenly illuminated field or clean disc will be seen. The correspondent states that there is in this way no difficulty in mapping out the disposition of foreign matter, and so arriving at an opinion as to whether it is advisable to have an operation or not. As an evidence of his faith in his own prescription he has made drawings at intervals during the last three years of a cataract which is slowly developing in one of his eyes. He further says that no oculist he has met with is acquainted with this method, and there may, consequently, be some advantage in making it public.

SLEEP.

THE most wonderful events of the world are most common. Did you ever think seriously about the below mentioned event—that of a quiet sleep?

The sun rises each morn in its same accustomed way. The moon in her own good time, silently comes forth to perform her gentle mission.

Now just suppose that for one day only, the sun would refuse to shine or the moon would withhold for a night her needed rays. How excited we would all be. From the cradle to the grave the most wonderful thing that happens to man is a daily event, and is not looked upon with any curiosity or wonder. That phenomenon is sleep. We go to bed at night and expect it, and if deprived of it we feel miserable and are unfitted for our daily tasks of to-morrow. How differently we perform our duties when deprived of our needed rest.

We perform them mechanically, and seeming with little or no thought centered on them.

Sleep has a soul-calming influence.

It approaches us as no stranger but an ever welcome visitor—but ah, how with sickly horror do we shrink from his brother, Death, who ever walks hand in hand with sleep. The invalid fully realises a night of sweet repose. During sleep the sum total of our energy is reduced, and later in the night the pulsations of the engine are at their feeblest, and people of the very ruddiest complexion at four o'clock in the morning are a deadly pale.

EXCESSIVE EATING A CAUSE OF PREMATURE OLD AGE.

THE growing young man or young woman requires more food than the one who has matured or reached full growth. Yet little attention is given to this. Dr. Conen says: "After the thirtieth year it is no longer necessary to eat to make more tissue, but only to preserve equilibrium of weight and strength. Yet at that time eating is a pleasure highly appreciated. Therefore most men and women eat too much, and this is the time of life when indiscretions in diet produce disease with especial frequency." Every one has power to hasten or retard the process of growing old. Of course, one who frets and worries will age more rapidly than the person who takes life serenely, and a great many things such as bad air, want of exercise, and overwork will help on the wrinkles and stiff joints. But food is more important than any other factor; and a proper choice of food and mode of eating will prevent worry, lighten the cares of life, make work easier, and so prolong youth, indirectly as well as directly.—*Good Health.*

WHY EXCESSIVE FRUIT EATING IS INIMICAL TO DIGESTIVE PROCESSES. By Prof. George Flint.

THE notion is widely prevalent that it is healthful to consume, particularly in summer, a large quantity of fresh fruits. If this be true it follows that, as most fruits contain more or less free acid, to introduce much acid into the stomach favours both digestion and nutrition, and helps to keep the blood in its proper condition; for, on the excellence of digestion and assimilation, and on the state of the blood, depends health.

Let us test this theory with facts. Digestion, as everyone knows, begins in the mouth. There, after food has been masticated and moistened, any starch in it is attacked by ptyalin, the active principle of saliva, which changes the starch into maltose, a kind of sugar. But ptyalin, itself alkaline, will act only in an alkaline or a neutral medium. This fact has been established by the experiments of Dr. J. H. Kellogg, who found that in slightly acid solutions the action of ptyalin on starch was greatly retarded, while in solutions more strongly acid it was wholly arrested.

After the food has been swallowed and has entered the stomach the saliva continues to act on it for from half to three-quarters of an hour; then the gastric juice, the only acid contained in digestion, is secreted, and this inhibits further diastasic action.

The specific digesting substance in the stomach is pepsin, which converts the albuminoids or proteids of the food into a soluble and assimilable form known as peptone. Pepsin acts only in an acid medium which is supplied by the gastric juice; for in normal gastric juice hydrochloric acid is present in proportions varying from one to four per thousand. Experiments have proved conclusively, however, that, as the acidity of the medium is increased above four per thousand, so the peptone-making power of the pepsin diminishes. That the gastric juice may come in contact with, and do its part in digesting the albuminoid constituents of starch foods, it is necessary that the starch be digested first.

Rennin, another substance secreted by the stomach, has the power of curdling milk. Acids also have this power. But while the curds from rennin are sweet and hold the earthy matters of milk, particularly the phosphate of lime, those formed from acids are sour and do not contain these substances. Acids

prevent absolutely the action of rennin.

We may assume now that the food has been partially digested and has passed as a semi-fluid mass (chyme) into the upper part of the small intestine—the duodenum. There it is attacked by a secretion from the pancreas called the pancreatic juice which consists of three digestive substances—namely, amylopsin, trypsin and steapsin. The amylopsin converts into maltose what starch has not already been converted by ptyalin. The trypsin changes what remains of the albumens into peptone, but with an activity far in excess of that of the gastric juice. The steapsin splits up and emulsifies the fats not before acted on, and thus makes possible their assimilation. These three elements again perform their functions only in alkaline or in neutral media.

The bile, a secretion from the liver, enters the digestive tract through the same opening as does the pancreatic juice, and aids the latter by uniting with the fatty acids in emulsifying the neutral fats. Acids inhibit its action also. The gastric juice and the bile have each considerable bactericidal powers. The liver, as well, disinfects and purifies the blood passing through it, and it is a storehouse for glycogen, which it doles out to the tissues as required.

Lastly, in this brief summary of the digestive processes, we have to note the functions of the intestinal juice, a secretion powerfully akaline. This neutralises any acids which have by their presence checked the digesting power of the trypsin, thus enabling the latter to resume and complete its action. The intestinal juice acts specifically, but only in neutral or in alkaline media, on all forms of sugar, converting them into the less complex and more absorbable substance known as glucose. Finally the small intestine has the extremely important function of transforming peptone into serum albumen, or globulin, in which form alone it can enter the blood.

Vegetarians, who are merely one class of extremists, tell us that fruits and nuts are the natural foods of man; but no races that have lived on these foods have become predominant, nor has the writer ever seen one fruit-and-nut faddist that appeared to be well nourished. Grapes rank as the most nourishing of the sub-acid fruits, yet those working in vineyards who have tried to live on them have failed miserably.

The importance of maintaining the blood in an alkaline condition is obvious from the fact that when certain bacteria are injected into it, the blood, to protect itself from disease, spontaneouscly increases its alkalinity by abstracting alkaline salts from the tissues. Acid blood renders the system peculiarly liable to various diseases, notably to rheumatism.

So I maintain that, as the juicy fruits contain considerable amounts of free acid, their consumption and the consumption of overmuch meat and sugar, which are acid-making, should be limited—first, that they may not overburden the system with acid that must be neutralised before complete digestion can be effected, and, second, that they may not produce acid blood (unless the chyme has been completely neutralised), which condition, as we have seen, invites so many diseases. While fruits and nuts are well enough as relishes, they should never be used as staple articles of diet.

TO PROMOTE LONGEVITY.

Youth depends, to a great extent, upon our ability to keep the blood and circulation in a healthy condition. The best method of doing this may be briefly summarised as follows:

"Take plenty of exercise in the open air—preferably in the country, away from the city."

The best exercise is a long walk in the country, and the benefit of such a walk is increased if only a very small quantity of fluid and food be taken during the walk. A good lunch for such a walk is a sandwich and an orange.

This walk in the open air not only enriches the blood with oxygen, but it strengthens the skin and nervous system, and through this the digestive system.

Great moderation in the amount of food, and especially of flesh food, should be practised, particularly by old people. There is no longer any doubt that moderate meat eating after the "meridian of life" is reached conduces to longevity.

Drink water and plenty of it after the age of forty years is reached. Most water is too "hard" for drinking purposes without being boiled. A glass of hot water gently sipped is a splendid stimulant and blood purifier.

THE FOUR GREAT FORCES OF LIFE AND HEALTH.

By John G. Eads.

THE four great forces at work in Nature to keep us living and well, all merge into one great trunk and centre; and that is activity. Life is like the great steam-engine, that goes screaming down our beautiful valleys and across our broad plains. The coal in the tender of the latter is like food is to man; both furnish the heat and are the source of power; the one for the machinery of the body, the other for the great iron-horse. The breeze that fans the spark in the fire-box and which kindles the flame, that heats the water, that produces the steam, that turns the great drive-wheel, is like "Flame or vitality in man." The drive-wheel with its mighty plunging piston is Exercise. The screaming whistle, the puffing smokestack, the ringing bell, the rattling wheels; all telling us that glad tidings are being brought to us from friends afar, or that some loved one is to be set down at our side—is cheerfulness.

All good and useful things are active. The cheerful fire that warms us, or cooks our food, is roaring, cracking, dancing, leaping. The sparkling water that quenches our thirst comes trickling down over the little pebbles, or falls in rain, penetrates the earth, until it strikes the bed-rock, and then comes bubbling up again, ever moving. The light that comes to us from the sun, is now said to be generated by vibration. The wind that blows is only the result of Nature's activity. The air we breathe is only pure when in constant motion. And all living creatures are active but a lazy man and a hog, and both are fertile producers of disease. A cessation of activity is succeeded by stagnation, and stagnation means disease and death.

Rest—yes, most assuredly, you must rest, but get tired first, and then enjoy every moment of your rest to the fullest extent possible. What is it to be tired? I'm going to tell you. There are two sources which supply the body with materials with which the blood is ever busily engaged in rebuilding or replacing the countless little tissues which compose every particle of our body. The one is the food, which is operated upon by the digestive organs, and the other is the oxygen which is assimulated by the lungs. If our exercise is a little in excess of that which our bodies are accustomed to, the tissues of the body are broken down more rapidly than the blood in its probable depleated condition can refurnish, and with the lungs undeveloped and the chest frame contracted, the blood is not furnished with sufficient oxygen, and thus the muscles and nerves are being starved and cry out for rest; or, in other words, that you cease to draw upon them until the blood has time and opportunity to renew itself. If proper food is furnished, rest will stop the destruction of tissue; the lungs will soon furnish sufficient oxygen and the normal condition will soon be established. Nature provided many helps to digestion, such as cleanliness, pure air, sunshine and cheerful surroundings; but the only possible means of distribution, development, strength and health are by proper exercise.

Now, the more active the body is, the more old and sickly tissues will be broken down and eliminated, and the greater demand there will be for new ones to take their place; and this is the way—and the only way—in which the body can be renewed and made better. And as long as the blood is kept supplied with materials for the rebuilding of the tissues, and the lungs have capacity to furnish the oxygen needed for the blood, exercise may be indulged in to the benefit of the body; but beyond that there is breaking down of cellular tissue, and exhaustion and harm results. So it follows that the exercise—especially for those who are not accustomed to it—should be wisely directed and gradual in its application, and should never be

indulged in if the blood does not contain the materials needed for the rebuilding of the tissues—the no breakfast sect to the contrary, notwithstanding.

We are told by a recent writer, that "exercise increases the action of the heart in the following proportion: When sitting, it beats from five to eight times more in a minute than when lying down; when standing the increase is seven to ten more beats per minute; when walking the rate is still increased, and when running the rate is doubled. But this increase of heart beats is not simply an increase in the number of beats per minute, there is also an increase in vigour, more blood is sent out through the veins and arteries; in order to do its work in the body it must pass through the lungs, and here it is purified by taking in oxygen from the air." A larger amount of air taken into the lungs, means, that new cells are being opened up, and when the lungs are excited by muscular activity of any kind, nutrition is drawn to them and to the chest-frame, and that part of the body is developed and strengthened. "When running, the amount of oxygen absorbed is seven times as great as when one is lying on his back and breathing normally. Oxygen is the great vitalizing element in maintaining the activity and vigour of the body. The more oxygen taken into the blood the more life there will be in the body; the more oxygen that gets into the stomach the better the gastric juices; the more oxygen that finds its way into the liver, the more cheerful the man's outlook upon the world; the more oxygen that is carried to the brain, the more mental work can be done by that organ."

A proper system of exercise should bring into use every muscle of the body, and if practised with sufficient frequency, soon the elastic step, the symmetrical shape, the brighter eye, the better appetite, the more cheerful disposition; all proclaim loudly the improved condition. Proper exercise insures a better complexion; better control of all the muscles of the body; and consequently more graceful movements.

The ancient Greeks recognised the value of special exercise and instituted their games and physical culture; and to-day, two thousand years later, the finely drawn features and the graceful carriage of those people are the best evidences of the value of Nature's methods.

Exercise should have the important place it deserves in our regime, and should be thorough and systematic in its application.

YAWNING.

A good, wide, open-mouthed yawn is a splendid thing for the whole body. A yawn is Nature's demand for rest. Some people think they only yawn because they are sleepy. But this is not so.

You yawn because you are tired. You may be sleepy also, but that is not the real cause of your yawning. You are sleepy because you are tired, and you yawn because you are tired.

Whenever you feel like yawning, just yawn. Don't try to suppress it. If you are afraid of offending somebody, suppose you step out of the room. Then yawn to your heart's content. Put your hand over your mouth if you want to, but let the yawn come. And if you are where you can stretch at the same time that you yawn just stretch and yawn. This is Nature's way of stretching and relaxing the muscles.

Don't be afraid to open your mouth wide, and yawn and stretch whenever you feel like it.

Indeed, if you are very tired, but do not feel like yawning, there is nothing that will rest you so quickly as to sit on a straight backed chair and, lifting the feet from the floor, push them out in front of you as far as possible, stretch the arms, put the head back, open the mouth wide and make yourself yawn.

Those tense nerves will relax, the contracted muscles will stretch, and the whole body will be rested. Do this two or three times when you are tired and see what it will do for you.

MONOTONOUS BREAKFASTS.

In some families it is the custom to serve always the same grain for breakfast—oatmeal, it may be, or some of the many prepared foods. This is a mistake, both because a greater variety is more appetising, and because the different grains contain different combinations of the food elements, and hence in a way supplement each other. One grain may suit the needs of one member of the family better than another, and variety is necessary in order that the needs of all may be met.

It must be remembered, however, that even the most nutritious food must be properly prepared in order that it may be digestible.

The nutritive value of grains is often greatly impaired by improper preparation. All grains require long cooking, in order that certain important changes may take place in the starch.

SUGAR DISEASES.

For a long time it has been noticed that diabetes is increasing very rapidly. According to the rate of increase during the ten years between 1890 and 1900, diabetes will be, by 1950, seventeen times as frequent as it is now; that is, if it continues to increase at the same rate.

Without doubt, one cause of diabetes is the excessive use of cane sugar. Observing physicians also attribute to the use of cane-sugar the increasing prevalence of rheumatism, gout, and other uric-acid disorders. The blood is overwhelmed with saccharin substances, so that its power to remove and destroy the wastes of the body is diminished.

Probably few are aware of the enormous amount of sugar annually consumed in this country. It amounts to nearly four ounces per day, per capita, of the entire population, and is rapidly increasing according to the following figures recently furnished us by the assistant statistician of the United States Department of Agriculture:

The Population, and per Capita Consumption of Sugar, in the United States, for the Past Five (5) Years, as reported by the Bureau of Statistics, Department of Commerce and Labour:

Years	Population June 1st	Per capital consumption of sugar (Pounds)	Total sugar consumed (Tons)
1900	76,303,307	65.2	2,487,487.8082
1901	77,647,000	68.7	2,667,174.45
1902	79,003,000	72.8	2,875,709.2
1903	80,372,000	70.9	2,849,187.4
1904	81,752,000	75.3	3,077,962.8

From the foregoing table it appears that the present use of cane-sugar in this country amounts to seventy-five pounds per capita annually, and that the consumption of sugar is increasing at the rate of a little more than two pounds per capita annually.

Experiments made on the German army have shown that the free use of sugar produces gastric catarrh and indigestion.

Experiments with dogs have shown very clearly that cane sugar is capable of producing gastric irritation and a great deal of disturbance when used in other than the very smallest quantities. A 10 per cent. solution was found sufficient to produce serious disturbance.

The fact that sugar has a high nutritive value has led many people, even physicians, to prescribe it freely even for invalids and children; but the nutritive value of an article is not a true measure of its value as a food. Its digestibility and its effects upon the digestive organs and other tissues of the body must also be taken into account. Cane sugar is probably responsible for more sickness and more deaths than any other one article of food. Its use should be as limited as possible. Sweet fruits, fruit sugar, or maltose should be substituted. Honey used in moderate quantities is decidedly preferable to cane-sugar, though to many persons the flavour is not so agreeable.

O'BRIEN FOUGHT ON "UMBRIA."

Passengers arriving at New York on the Cunard steamship "Umbria" had an interesting yarn.

On the first cabin list was the name of J. F. Hagan. The ship hadn't been long away from Liverpool before the name was recognised and then it got whispered about that "Philadelphia Jack" O'Brien was a passenger.

After a while the news got down to the fireroom, where George Munson was shovelling coal.

Said George:

"Wasn't Hi the best fighter hin hall the bloomin' British navy? Well Hi can put 'em hall hover that fellow hif 'e honly will give me a chance."

Somebody told the Philadelphian about it. "Why," said Jack, "I will give the fellow a chance," and he did. Not only that, but he agreed to take on any two of the crew, one at a time.

The game was pulled off on the afterdeck in a regulation twenty-four foot ring, which was roped off where all the passengers could see it.

Munson was the first to come up. He lasted just two and a half rounds and then Jim Smith, also a stoker, had his turn. He did half a round better, but had all he wanted when the gong rang.

Mr. Hagan shook hands with his two opponents and went to his cabin. When requested he refused to talk about the fight.

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NEW SWIMMING RECORDS.

At the Woolwich Polytechnic Swimming Club's gala at the Woolwich Baths, David Billington broke the world's professional record for 300 yards, his time being 3 min. 39 1-5 sec. The previous best was 3 min. 40 sec. by J. Nuttall at Birkenhead in 1901

An amateur, B. B. Kieran, has, however, swum the distance in 3 min. 32 sec.

The quarter-mile championship of Kent was won by R. Shove, of the Lewisham Swimming Club, his time being 6 min. 36 sec.

W. Call swam fifty yards at Rotherham recently in 27 3-5 sec., this time being a record for the distance.

At the Camberwell Baths, the Southern Counties 100 yards championship was won by A. G. Harvey, of the Ravensbourne Club, in 1 min. 7 3-5 sec.

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'SPURS SIGN ON REILLY.

The directors of Tottenham Hotspur have signed on J. Reilly, the well known goalkeeper. Reilly played last season for Notts County, and kept goal on sixteen occasions for that club. He is better known in the south as the goal defender for Portsmouth, which organisation he joined in 1899. He has also played for his native land (Ireland) against England. He is 5 ft. 10½ in. in height and weighs 12 st.

EXPERIENCES OF HYPNOTISM.

By Arthur Macdonald.

HYPNOLOGISTS have frequently expressed regret at not being able to procure personal and exact observations made during hypnosis. The difficulty is that profound hypnotic sleep generally renders personal observations impossible because of amnesia which accompanies it. Even when the hypnosis is light and does not exclude all memory it is difficult to procure information from sincere persons accustomed to psychological observations. The majority of subjects are sick people, more or less nervous, who see nothing in the experiments but a pretext to be theatrical, and consequently their testimony must be taken with caution. As a result it is very difficult to analyse the suggestion, the manner in which it is perceived by the subject, and the mechanism by which it is executed.

A possible way to escape these difficulties may be, firstly, in not taking sick people as subjects, but persons accustomed to psychological studies and exact analysis; secondly, in simplifying the suggestion as much as possible so that the accessory phenomena do not take a preponderant part and thus mask the principal phenomenon; and finally, in placing the subject in a condition which, if not normal walking, is not a state of profound hypnosis, and in which he retains absolute liberty of mind and his faculties of attention and analysis, the memory being neither abolished nor weakened.

To this end we give a number of experiments by Dr. Joire on his pupils. At the first seance there were present sixteen students, the majority belonging to the faculty of medicine, the others to law and letters.

Mr. C., a medical student, offered to serve as a subject. His eyes were covered by a band made expressly for the purpose—a double black cloth mask with an opening for the nose, and on each a large pad of cloth which filled up the hollow between the cheek bone and the nose—and the subject placed in the middle of the room. Longitudinal passes were then made before his face and the whole length of his body, then his hands were held a few minutes, regarding him fixedly.

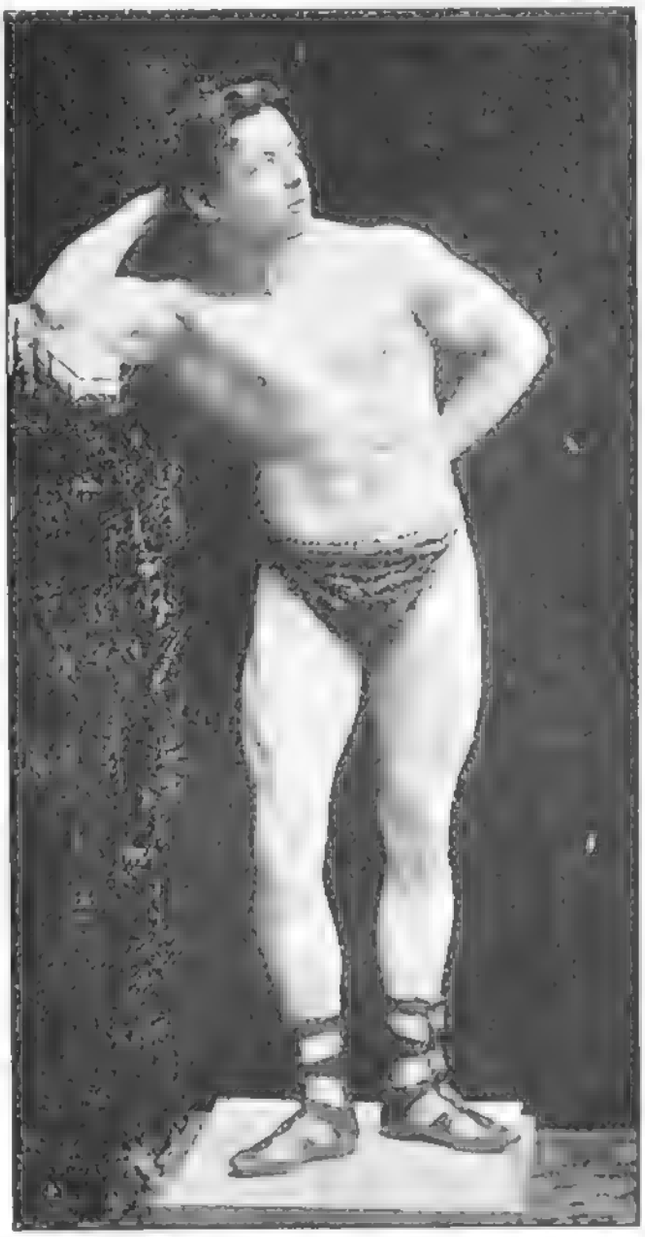
The doctor moved away and stood three or four yards in front of him, at the same time mentally suggesting that he raise the left arm. In a few seconds this arm, which hung by his side, began to show successive movements—one would say contractions such as a feeble current of electricity would produce passing in the flexor muscles of the hand and forearm. After these movements the arm moved out from the body and rose without bending to a horizontal position as though moved by an invisible spring. While the left arm was thus raised it was suggested that the subject raise the right arm, and shortly it went through the same movements with remarkable precision. Then a like suggestion was made which caused the arms to fall in their former position.

They fell slowly with the same automatic movement, not as they would if inert and fatigued by their own weight. This all took place in full light and absolute silence.

The subject gave an account of his sensations. When the passes were made he felt a sort of gentle numbness or dizziness, then the left arm obeyed the influence of a strange impetus and was pulled forward and upward by force. The force then ceased to be felt and the movement of the arm was arrested. The same force was felt in the right arm, and after a few seconds it was felt in both arms in an inverse sense, which determined the lowering and returning of the arms to their normal position.

The second experiment was made on Mr. B., a medical student. The same preparations were made as in the first case. The subject was placed in the middle of the room well in the light. The doctor then stood three yards in front of him, leaning with his hands on the back of a chair behind him, and

suggested that he should raise the right leg, the doctor himself accompanying the suggestion by the movement. In from fifteen to twenty seconds the subject rested all the weight of his body on the left leg, bent the right knee till only the toe touched, and finally lifted it entirely. The bandage was taken off and the doctor breathed on his eyes, and he then related his sensations. He did not emphasise the numbness, which, however, he declares he felt before the suggestion, but he distinctly felt an unexpected and involuntary contraction of the muscles in the thigh, which caused the raising and bending of the knee.



At the second seance M.X., a medical student, who had been present at the first, said he was not convinced of the reality of the impulse which the subjects claimed to feel. He did not doubt their good faith, but thought there must be auto-suggestion and that the spontaneous movement only chanced to be the one desired, etc. Dr. Joire proposed to repeat the experiments on him. He being sceptical and prejudiced against auto-suggestion, a successful experiment would have all the more value. M.X. was blindfolded (he declared that he was convinced that to try an experiment on him was useless), and passes made on the head and body, he, at the same time, being told not to imitate from memory and not to resist any distinct impulse. The operator then stood about two yards from him and began a mental suggestion to move the left arm out, but parrallel with the body, and then to bend the forearm up on to the arm. In a few moments the automatic movements began, slowly but without hesitation.

When asked why he made the movement, M.X. confessed, with some surprise, that he had felt a force drawing his arm in the direction followed, that he at first resisted, but the impulse continued to act and became very strong, when he no longer resisted.

One of the subjects who had served before was then led from the room while those remaining made a chalk line with numerous curves on the floor. When all was ready the blindfolded subject was led into the room and placed at one extremity of the line. The operator, without touching the subject, fixed his attention on the line which he was to follow. This line began at the door, described a circle to the left, turned to the right, and again a large circle to the left. The subject followed the line step by step, very exactly, stopping and seeming to hesitate at the curves.

The same experiments were repeated several times with different subjects, which permitted the operator to gather the impressions of each under exactly the same conditions. Each of the

subjects experienced the same sensations and analysed them in the same way.

It is of great interest then to find in what condition the subjects are at the time of receiving the suggestion. In appearance they are awake and, in fact, if questioned after the experiment would unanimously reply that they had not slept. In reality they were not in a sound sleep, but neither were they in a normal waking condition. The proof is found in the fact that when the passes were made they all experienced a change, they say something seemed to isolate them, and there was a vague numbness and tingling all over the body.

The subjects were in a state which has been described as medianic or passive—the attention to whatever came from the person suggesting was exalted to a point which it could not attain in a normal condition. It is probably this modification of the subject which admits of the establishment of communication between himself and the operator by which he can be impressed by an influence purely psychic. This psychic correspondence between several individuals does not appear to be abnormal or even peculiar to the hypnotic state, but in the "medianic" state there is an orientation peculiar to this nervous influx, and at the same time a concentration of force towards some individual.

It has been ascertained that the presence of another person, and who makes an effort contrary to the suggestion, considerably hinders the experiment, and can even prevent a complete success.

Mental suggestion requires a considerable effort of will on the part of the operator, which effort must be sustained without interruption throughout the time required for the suggestion.

This constant effort of will, this fixity of the attention, concentrated on a single object, is not as easy as may be imagined and requires a certain education or training.—From *Health*, London.

MAN'S SOUL AND HIS STOMACH.

They've no sense, men haven't, the very best of them don't properly know the difference between their souls and their stomachs; and they fancy that they are a-wrestling with their doubts when really it is their dinners that are a-wrestling with them.—JOHN OLIVER HOBBES.

GOOD FOR THE VOICE.

By ordering his patients to eat heartily of certain fruits and forbidding them to touch others at all, Dr. Nadal, one of Paris's foremost scientists, is treating the throats of the great opera singers.

There is no medicine at all in his treatment. In some cases he adds nothing to the patients' diet and secures results by forbidding them to eat apples and pears. According to Dr. Nadal, an apple or pear each day is enough to keep a sensitive throat out of order all the time.

A singer, of course, notices the first symptom of throat disorder in the form of congestion of the vocal cords. These, instead of being white and thin, like a tendon become red and swollen with congestion of blood. The high notes become difficult and the quality of the voice is impaired.

The ordinary person notices nothing until a dryness in the back of the throat or tickling keeps him swallowing and scraping. This may be caused by an apple or pear eaten the night before.

If you are not an apple eater but have throat trouble it may, according to Dr. Nadal, come from other supposedly innocent edibles. Jams, syrups, and all kinds of sweetmeats are condemned as enemies to the vocal cords. Half a dozen pieces of candy are said to be as bad as apple and the syrup eaten on porridge by the singer in the morning is enough to send the manager before the footlights with a sudden illness apology.

But if apples, pears and sweetmeats are bad, oranges, lemons and other acid fruit have virtues to compensate. These fruits, by their acids and other properties, have an antiseptic influence on the throat and stomach. In addition, they act as astringents and tonics to the vocal cords, inducing the blood vessels to shrink and reduce the over supply of blood.

The doctor declares that a person with a harsh speaking voice, or one whose tones are hoarse or thin and piping—will find immediate improvement resulting from the eating of plenty of oranges, lemons or limes.

Lime juice is good also. Those who dislike lemons or find that they disagree with their stomachs, and with many this is true, or that they have a bad effect on some chronic ailment, can substitute tomatoes. This vegetable is about as good for the throat as lemons or oranges and has no enemies among the medical profession.

The prescription is to eat one or two of the oranges or tomatoes each day if you have but little trouble. If your throat is in a very bad condition or fails to respond, then eat as many as you conveniently can without injuring your appetite for meals.

A good way is to abolish puddings and sweets and substitute fruit and cheese for dessert, and thereby derive medicinal benefit and real nutrition instead of adding an extra load of indigestible and valueless matter to a probably overloaded stomach.

ABSENCE OF MIND.

Some Very Extraordinary Instances.

REMARKABLE forms of this curious mental disorder are of constant occurence, although the originating cause has generally been admitted to vary in different persons; indeed, illustrations are recorded of this state of mind which would appear to be incredible, if not well authenticated, and in accordance with certain recognised laws of mental life. Thus, according to Sir Henry Holland's explanation of absence of mind, "the consciousness is detached for a time from objects of sense actually present to the organs, concentrating itself upon trains of thought and feeling within." Hence, the loudest roar of cannon may pass unnoticed to the officer who is intently engaged in manœuvring his regiment or his ship in the hour of battle. In the same way, a full orchestra may be executing a chorus of Handel while the mind is wholly absent from any consciousness of it. In short, let the consciousness only be occupied continuously with one idea or train of ideas, and nothing else can find a place; "the external world and all its influences are shut out; their is neither pain nor pleasure from outward agencies, nor is there perception of any kind whatever."

IN SOME PERSONS

this power of abstraction, writes Sir William Hamilton, almost degenerates into a habit akin to disease. Thus, Cardan, the illustrious philosopher, was on one occasion when on a journey so absorbed in thought that he forgot both his way and the object of his journey. When asked by the driver which way he should proceed he made no answer, but was surprised when he came to himself at nightfall to find the carriage at a standstill, and directly under a gallows. By Cicero, in his "Treatise on Old Age," mention is made of Gallus, who, when he sat down to write in the morning, was surprised by the evening, and when he took up his pen in the evening was astonished by the appearance of the morning. Archimedes, again, was so absorbed in a geometrical meditation that he was first aware of the storming of Syracuse by his own death wound.

It is probable, writes D'Israeli, in his "Curiosities of Literature," that the anecdote related of Marini, the Italian poet, is true, that he was once so absorbed in the revision of his "Adonis," that he actually suffered one of his legs to be burned for some time before he became conscious of the pain to which he was subjected. Numerous anecdotes are told of Hogarth's absence of mind. Thus, calling one day, writes Nichols, on the Lord Mayor Beckford, he came out at a wrong door, forgot that he had a carriage, and after seeking in vain for a hackney coach, returned home wet to the skin. The same authority also tells us that "he would sometimes turn his chair round as if he had finished eating, and as suddenly would return it and fall to his meal again."

RICHARD BRINSLEY SHERIDAN,

again, during a conversation one day with his sister, in which he was much interested, took up without the slightest consciousness a pair of ruffles, which she had just worked at a cost of much time and trouble, as a gift for her father, and with a pair of scissors kept snipping them, till the conversation was over. John Scaliger, when a Protestant student at Paris, was so completely engrossed in the study of Homer, that he became aware of the massacre of St. Bartholomew and of his own escape only on the day subsequent to the terrible catastrophe. La Fontaine is reported to have been one of the most absent-minded men, and the following anecdote is told in connection with this singular peculiarity. La Fontaine attended the funeral of one of his friends, and some time afterwards he called to visit him. At first he was shocked at the information of his death, but recovering from his surprise, he remarked, "True, true! I recollect, I went to the funeral." On the day of his marriage the famous Budœus forgot everything through being absorbed in

his mathematical speculations, and was only awakened to the affairs of the external world by the arrival of a messenger from the marriage party, who found him busily engaged in the composition of his "Commentarii."

EQUALLY ABSENT WAS NEWTON; indeed, so much so, that he occasionally forgot to dine. Fuseli was liable to fits of abstraction, and often, "when given up to the wild fantasies which suggested subjects for his pencil, he was occasionally heard to call out 'Michael Angelo' in a loud voice, as if the great master were within call." Mr. Timms, in his "Anecdotes of Eccentric Persons," refers to the absence of mind of Canon Bowles. One day he started on horseback to ride to Chippenham, and dismounted to walk down a steep hill, leading the horse by the bridle slung across his arm, and so continued to the turnpike gate, where he offered to pay the toll, but was not a little surprised when the gate-keeper said, "We don't charge nothing for your honour, as you beant on horseback." On looking round, he perceived the bridle on his arm, but could not decry his horse. On another occasion it is related that he visited London for the express purpose of waiting on the Archbishop of Canterbury to solicit a vacant living, but omitted to leave his address, and quitting London abruptly, he could not be found when the prelate sought him a few days afterwards.—*Health.*

The Value of Pain.

PAIN is not disease; it is a symptom calling attention to the fact that disease exists. We do not remove the disease by stopping the pain. When putting my hand against a hot stove the pain may be stopped in two ways. (1.) By making an injection of cocaine, morphine, or some other nerve paralysing drug in my arm, without removing the hand. (2.) By removing the hand. In the first case the pain would at once cease. Could the man be blindfolded, he would declare that he was out of all danger, although his hand would be dangerously injured by being allowed to remain against the stove. In the second case, although the pain would not cease at once, the member would be saved.

Headaches usually arise from disturbances in digestion, due to over-eating, eating freely of soft foods, making bad combinations of foods, too much of a variety at meals, etc. Fermentation and decay of the foods with the formation of poisons and irritant result. The danger is reported at headquarters. The thing to do is to heed the voice of the faithful sentinel, assist Nature to get rid of the impurities generated either by washing out the stomach, drinking freely of water, fasting for a day, by vigorous exercise, or eliminative baths. Recognise in the pain the voice of a friend calling attention to the fact that we have done wrong, and resolve never to violate the Laws of Health on this point again. In a day or so the transgressor would feel well, and would be able to keep from getting into the same or a worse condition by avoiding the causes.

This is not the way these symptoms are usually treated. Pain is looked upon as an enemy not as the voice of a friend. The sick one goes to a physician and demands something that will stupefy or paralyse the nerves—the pain must stop at once. He is given an opiate, the pain stops; the food still keeps on decaying in the stomach, he imagines he is well. The disease still exists, the symptom alone has been removed. The faithful sentinel has been knocked down. The means of telegraphic communications to headquarters has been severed. The enemy has his own way, and is able to go ahead undisturbed in his destructive work. The watchers are asleep under an anæsthetic or opiate. The enemy enters the camp. Poisons that are generated in the stomach through errors in diet overwork and irritate the liver, the lungs, and kidneys, through which they are eliminated, and finally result in Bright's disease; or the lungs being weakened are not able to resist the germs of disease that are inhaled. He falls a victim to tuberculosis, and is now in a serious if not an incurable condition.

The only safe way is to study the human body, and become familiar with the laws upon which health, happiness and life depend. Prevent pains, woe, and sickness by avoiding their causes.

READERS' CLUB.

President - - EUGEN SANDOW.

Motto:—One may Help Many.

For the exchange of ideas, personal experience and photos for the encouragement of Club Members. Every Reader is a Club Member.

Readers are expected to act up to the Club Motto, and for services rendered the President will award to the sender of every published idea, experience or photo, the Club Fellowship Medal as a token that the rightful owner has earned the Fellowship of the Club.

[Readers entitled to Medals must make written application for same, enclosing 1d. stamp and cutting of "Letter," same bearing date of issue. No medals will be sent without this application.—THE PRESIDENT.]

A South African Champion.

Wind Huk,
South-west Africa.

SIR,—No doubt you will be surprised to hear from a Sandow enthusiast in the wilds of German South-west Africa, where your little magazine is now also read. I get two copies posted to me every week from the Cape, where I had a class of young pupils to train on your system and I am still doing all I can in my power to spread the system. I have benefited from it very much in the past seven years. Before that time physical culture was an unknown thing to me, but on seeing a young friend of mine lift 75 lbs. in either hand with such ease, and also bullying everybody that he thought he could beat, I determined not to be bullied any more, so at once went in for building and developing my body systematically, with the aid of your magazine and afterwards your book, "Strength and How to Obtain It," as my teachers. I constantly exercised until to-day when I now claim the S.A. Rubber Stretching record. So now you can see what that big bully did for physical culture; he converted me and myself many others, one of whom is in England to-day making a name for himself in the athletic world. My favourite pastimes now are skipping, boxing, dumb-bells, and your chest expanding exercises, which I think are second to none. I am a life long abstainer from strong drink and tobacco, and would like to see some of my brother readers start an anti-tobacco athletic club, of which I will at once become a member.

My lifts are as follows: right hand, from ground above head, 100 lbs.; left hand, 90 lbs.; both hands, 140 lbs. barbell. Can also stretch fifteen of your strands with my own handles attached, which measure 4½ ins. in length. My arm stretch is 5 ft. 5 ins. Allow me to congratulate my brother reader, C. H. Dancey, of Gloucester, in stretching his twenty strands. I would like to know his arms' stretch, length of handles, and also whether the strands were new or old.

A. J. LIND.

Concentration Necessary.

Cape Town,
South Africa.

SIR,—I take this opportunity of letting you know the good your system of physical culture has done me. At the time you visited Cape Town, I was using your developers, but without any visible signs of improvement to myself. I watched you demonstrating at the Tivoli, and noticed that you concentrated your mind on every muscle you brought into play, and I resolved that in future I would do the same with the result that I improved rapidly. Four months ago I joined a physical culture school (the Sandow System) in Cape Town, under the able tuition of Mr. Nuthall, who learnt your system in England. I can say with pride that I have never touched a drop of liquor nor smoked in all my life.

E. J. ROWSE.

Used to feel Completely Knocked up.

Lidgetton, Natal.

SIR,—About two years ago I had a bad attack of indigestion, and could not sleep at night for it. I had to walk five miles a day to my work. After walking a little way I used to feel completely knocked up.

One day a friend of mine advised me to get a pair of spring grip dumb-bells. I got a Developer instead, more for the fun of the thing than anything, not having the faintest idea it would do what it has done.

I had a lot to put up with, as everyone who heard I had it used to make fun of me. However, I stuck to it, and after about eight months I could walk any distance and sleep like a "top."

One night, while I was exercising in my room, three young men came in, and when they saw the good it was doing me two of them promised to start as soon as possible. They asked my advice on which to use, and I advised them to start with the Developer, and then get your "grips." Hoping to receive a Medal.

W. R. THOMPSON.

Once Discouraged—Now Encouraged.

Cork.

SIR,—About two years ago I was quite a weakling, and could not take part in any sport. I used to think that life was not worth living. But one day I met a chum of mine and he quickly noticed my colour. He asked me if I would go in for some exercise. At first I refused, but by great coaxing he got me to go to his house and start some dumb-bell exercises. When it was over he asked me how I liked it. I said it was no use at all, so I stopped it at once. I then found myself growing worse every day, so about six months ago I made up my mind to start again. I got a chart of your exercises from a chum and I bought a pair of solid dumb-bells. I kept at it for a full month. I was surprised at the result, as also was my father. He then advised me to continue it, which I have. I have now bought a pair of grip dumb-bells from your company on the monthly system, 2s. 6d. a month.

I advise all young lads to take up physical culture. I am now enjoying perfect health, thanks to your system.

JOHN HENNESSY.

A Fine Experience.

Isleworth.

SIR,—After having seen so many letters in your magazine from readers, I thought perhaps my experience as a Sandowite might be interesting to others. I have for the last seven years been a reader of the magazine, and have found it very helpful in instructing me in many ways. At first I used a pair of three pound iron dumb-bells, but after meeting one of your Gold Medallists (Mr. J. S. Patrick) and seeing your competition in September, 1901, at the Albert Hall, I saw the advantages of your grip dumb-bells and developer, both of which I obtained and have used ever since.

Four years ago I was elected Hon. Instructor of our local gymnasium, with a membership of about forty men and twenty ladies, whom I have taught your system too with the most encouraging results. I have always made it a practice of distributing the magazine amongst the less enthusiastic members of my classes, being a firm believer in your Motto: "One May Help Many." Hoping others will receive the same benefit from your exercises as I have.

F. DELL.

Once Consumptive—Now a Weight-lifter.

Seedley, Manchester.

DEAR PRESIDENT,—My Medal has just arrived and I am heartily delighted to own the same. I wish to tender my warmest thanks for the Medal, and also for the letter you sent me in January, 1899, which was the means of my present good health. At the time you sent the letter I was working half-hearted at my exercise, as I was like all beginners, too anxious to get strong quickly, and because this did not come in a few months I was feeling despondent. At last your advice came, and I set to work again with the result that I have had no need for medical advice since my complaint, which you will know was bronchitis, with consumption of the throat and lungs. I am at present training for a concert, where I will be giving a weight lifting display, which is proof enough that I am pretty sound at present. I will be pleased at any time to render my services to the cause which is so urgently needed in our country of physical degenerates (as the Press puts it). Again wishing you success and long life.

WALTER H. DICKINSON.

A Generous Offer.

Cross Roads,
near Keighley.

SIR,—As a regular subscriber to your magazine I always anticipate each number with pleasure. I first noticed your magazine on Keighley station and was attracted by the cover. I was then very thin and not over strong, so on reading it I resolved to try and improve myself. I bought your grip dumb-bells and used them ten minutes each night and morning. My condition soon improved, and when I felt like giving up my exercises I read your magazine, which acted like a tonic, and I was filled with a fresh desire to improve myself each time.

I have about 150 magazines on physical culture, and I shall be pleased to give some to anyone calling at our house.

W. GREENBANK.

Running and Physical Culture.

Ardwick.

SIR,—Seeing you have commenced a club in connection with the readers of your magazine, I should very much like to become a member. I am fifteen years of age and I am well developed. I have been doing some running lately, and the first sports I entered for was the Hairdressers' Sports, in which I was successful in taking off the 1st Prize for the 220 yards by 20 yards. The race was for youths much older than myself, and when I received my programme stating who was competing I felt downhearted, but still I tried to think my chance was as good as others and I knew that I had a good pair of legs to carry me, and much to my surprise I found myself taking a good lead of 20 yards, and in very good time. The sports were held on August 28th, 1906. Since then I have not competed in sports but have been doing cross country running and will next season be competing in the Half-Mile in most of the large meetings. I am hoping, too, to be successful. My chief point in training was physical culture, and I think your developers are far above others, and the more you pay the better they are in the end. I am going to decorate my bed-room just as you have illustrated in your last edition and then I will send you the photo of the same. I am thinking of going in for wrestling and weight lifting, and I wish you would send me the prices of these.

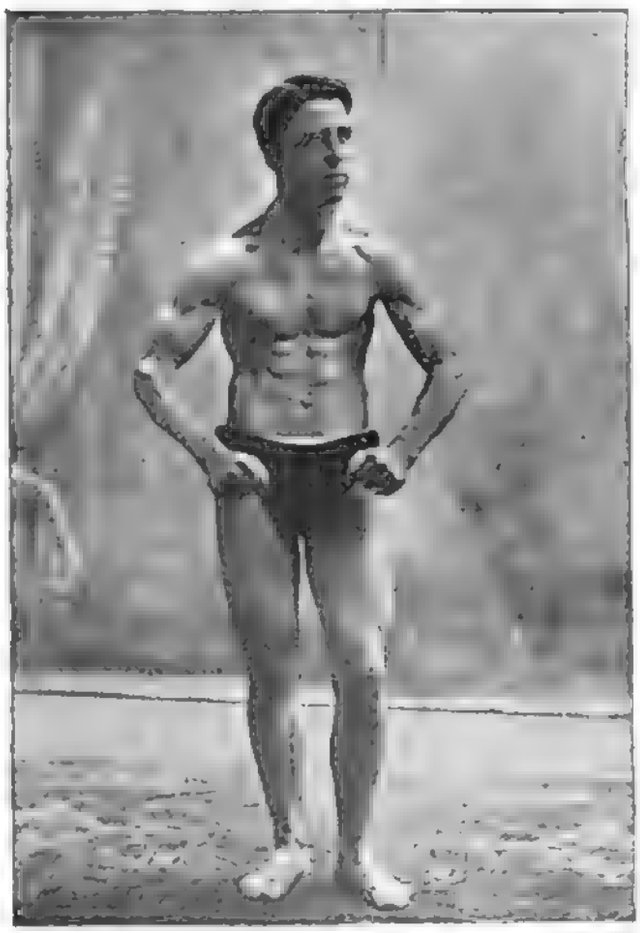
HARRY TYNAN.

Enthusiastic Scot.

Clackmannanshire.

SIR,—I have always waited (but in vain) to see in your Readers' Club a letter from the wee country, so I now take this opportunity of writing you to give you my own experiences since taking up physical culture. About a year ago a friend of mine handed me a SANDOW'S MAGAZINE in the hope that I would really see for myself the condition I was in, physically. I had never taken any kind of exercise, being content to spend my time reading "bloods" or in the company of undesirables and having acquired a very bad habit I was fast taking steps to be a wreck. Then, after studying your weekly and fighting out the problem, I agreed to give Sandow a trial and that meant the turning point in my life. Of course I had to stand a great lot of chaff from my old chums, but in three months time they began to see a change in my walk alone and for the first time they began to think after all there must be something in physical culture. They began inquiring about your system and I gave them of my best, which was very little; but having read your book, "Strength, and How to Obtain It," for themselves, I got three of them started on their own, and now the company numbers six in all; but with the winter before me I hope to set a few more on the dot. I don't believe in this system of lending on my magazine, not that I feel selfish, but I think that for the benefit of the cause buying your own magazine will circulate the principles further. After seeing my own results I feel sure that any young man who takes up exercising in dead earnest will be more than pleased with the benefits he receives from the system. To tell you the truth, Editor, I respect my body now and will always do my best to instil that into others and by doing so keep up the Club Motto: "One May Help Many."

R. THOMAS CAMPBELL.



Will Mr. Fred Williams, of Bristol, please send his address to Mr. W. Beck, Edgebury, St. Alban's Road, Hemel Hempstead, Herts?

Useful All-round.

Tunstall,

Stoke-on-Trent.

SIR,—Being a reader of your magazine and a physical culturist for three years, I take great pleasure in telling you my experiences and how I have benefited from them. About four years ago a friend and myself went to the Grand Theatre in Hanley to see a miniature Hercules. I was so interested in his performance, which consisted of weight lifting and posing, that I determined to take up physical culture as a hobby, as I was healthy, but my carriage was very slovenly, and I was short winded. Soon after then I started to work in a coal mine with my brother, and he, I may say, had developed a craving for strength too; so we exercised every night with a pair of six pound dumb-bells, but as these were too heavy we soon got tired. A few months later we determined to try again, so we got some friends to join us and took a small room which we fitted up as a gymnasium. We find this was a good step in the cause of physical culture, as it has been the means of changing scores of youths from being very reckless, to moderate livers, besides improving their health, and physical development. We got on splendidly, and as two of the members were stronger, and more active than the rest, we agreed to form a small troupe, which consisted of these two members, my brother, and myself, with the object of giving performances in aid of local charities, and to still further the cause of physical culture. We got on exceedingly well in our practice, and soon had an engagement at the local town hall, and soon after this we performed at several other places in the district. Our performance consisted of a series of pyramids, hand balances on chairs, and a few gymnastic feats without apparatus, following with a show of muscular development by myself, and weight lifting by another of the troupe, finishing with a bout of exhibition wrestling by my brother and myself. Eventually our troupe broke up, but we still keep to our little school. I never adopt any special system of training, but exercise

regularly with grip dumb-bells and chest expander with plenty of breathing exercises. I go in for most of the athletic pastimes, such as club swinging, boxing, wrestling, and gymnastics and am proud to say I can teach all these fairly well. I also go in for a little cross country running which, in my opinion, is an ideal sport for young men, not only so far as the exercise is concerned, but it is the means of them giving up most of their bad habits in order to bring about better results. I do not go in for weight lifting seriously, but I have a fancy for bodily strength, such as the following feats, which I think fairly good for my weight, which is only 8 st. 10 lbs. Lying on the back and pull over head 130 lbs., push to arms' length and support two 9 st. men sitting upon it, making a total of about 400 lbs; supporting 100 lbs. in my teeth whilst standing on my hands. I devote a lot of my time to posing, which is very good for bringing the muscles into shape. I am a non-smoker and a teetotaler. I eat just what I fancy, taking care to masticate it well.

W. GOODFELLOW.

Headache Banished.

Eccles, near Manchester.

SIR,—I am taking the liberty of writing to you, telling you the benefits that I have gained from following your system of physical culture. I have been following it up for about three years and I can tell you honestly that I would not give it up now for anything after the benefits I have gained from it. I hardly knew what it was to be without a bad headache, but now I can tell you that I enjoy the best of health and never know what it is to have a headache. I have always used your developer and followed your charts, which I think are about the best.

F. RIDDIFORD.

Another Lady Enthusiast.

Forest Gate, Essex.

SIR,—Having been a constant reader of your most instructive magazine for some time, I now feel that I must write and let you know how I appreciate your system. I commenced physical culture in May, 1904, but it was not until I bought your symmetrion that I exercised regularly. I always exercise from half an hour to an hour daily. I also have a daily bath (hot) and am a vegetarian. I have always had excellent health owing, I think, to my being so much out of doors. I never miss my daily walk. I have not gone in for any sports yet (except swimming) but I hope to do so soon. After reading your magazine I leave it in a train, 'bus, or in any public place at which I may be. I think in this way a different person has a copy every week. I have just read your book, "Body Building," and next I shall get "Strength, and How to Obtain It." The former I have given to a gentleman friend. I hope to live in London some time in the near future. I shall then become a pupil at your school. I shall be twenty-one in March. I often wish that I had gone in for physical culture when I was a child. If everyone were to make his or her body their hobby how much happier would the world be. I will write you from time to time as I know that you are always glad to hear from your readers. I may say here that I never miss an opportunity of seeing athletes and acrobats at the hall; I enjoy nothing better. I must not write any more now as I know your time is valuable. You may believe that I shall always act up to your Motto: "One May Help Many."

MARION WOODGETT.

The Art of Sane Living.

Jullundur.

SIR,—I should like to give you a brief account of myself, how I came to start your exercise, etc., which is as follows:

When I was about fifteen years of age I was very weak, had very little energy in me, and in fact was very unhealthy. It happened once that I came across an old magazine of yours and reading it I made up my mind to start your exercises and be healthy and strong as men are apt to be. Without fail I ordered locally a developer and started exercising with it. In a short time I noticed the benefit and gave all my mind to it. After some time I bought a pair of your grip dumb-bells and used them as well in conjunction with the developer.

When I went to Bombay, to my relatives, for a couple of months, I am proud to say that my friends and all used to envy my body and strength and no doubt used to call me "young Sandow."

Now as an experiment I take a weighing balance and on the tray of it I press my little finger and am able to press it to 10½ lbs. without bending the finger at all. I press it down as straight as a stick.

SORAB C. CURSETJEE.

P.S.—Perhaps it will be of some interest for you to publish in your magazine that I always, every day, in summer or in winter, have baths in cold water early in the morning after your exercises, as you suggest in your pamphlets, and have never before enjoyed health better without cold baths. I take entire care of meals. I never drink tea nor have even tasted it for the last ten years. I drink only cocoa or milk. I am so much pleased with your exercises that I have recommended about ten of my friends, and can boldly say that out of them six have already started it. Your exercise is a pleasure to perform—pleasure and strength combined.

From Hong Kong.

N. H. Alves (Hong Kong) sends me copies of local newspapers containing particulars of the recent disastrous typhoon, which, he says, eclipsed all previous records. Thanks, N. H. A.

A Correction.

Miss P. C. (Ashtead).—Many thanks for kindly correction, instructions for which have now gone forward.

STOMACH DERANGEMENT.

How it Affects the Whole System.

DR. CHAS. S. BACON discusses some of the remote effects of stomach derangement upon the physiological economy, and classifies them as follows:—

INFLUENCE ON THE BLOOD.

Deleterious influence of stomach diseases on the blood is shown in various ways; for instance, as a result of subnutrition, we sometimes see the condition of inanition anæmia. This inanition acts in two ways on the blood, causing an insufficiency of the hematopietic organs, or by altering the composition of the plasma. The resisting power of the red corpuscles being lessened, and the development of the white corpuscles also lessened, we may have as a result of subnutrition, dyshematopoietic oligocythenia, and this condition may be associated with hemato-cytolysis; a lessened supply and absorption of water with increased elimination may produce oligemia-sicca; gastric ulcer, carcinoma, and erosions may produce, by reason of hemorrhage, anæmias of mild or grave type. Indeed, the quantity of blood lost may exceed the quantity of blood furnished by the hematopoietic organs. In carcinoma and diseases of the stomach with inflammatory complications a leucocytosis may develop.

INFLUENCE ON NUTRITION.

Nearly every disease of the stomach disturbs nutrition; acute, also chronic, diseases of the stomach disturb the processes of digestion. The most frequent disorder of these processes are excessive nitrogenous waste, uricacidemia, and phosphaturia. Subnutrition is caused by a diseased stomach in many ways, often insufficient diet owing to loss of appetite, disgust for food, to avoid pain, as seen in ulcer, carcinoma, acute gastritis, or even hysteria, or on account of some injurious plan of alimentation. Moreover, some of the food may be lost by vomiting, fermentation, putrefaction, diarrhœa, etc. Nutrition is more or less disturbed whenever motor or secretory insufficiency is present. In carcinoma, some cases of mycotic gastritis, and auto-intoxication the nitrogenous catabolism exceeds the requirements of the blood. A diseased stomach may cause an accumulation of uric acid in the system by producing an acid auto-intoxication. The uric acid diathesis is a complex chemical condition.

Carcinoma and chronic gastritis with motor insufficiency, together with myasthenia associated with lessened secretion, are the most common diseases of the stomach, producing uric acid precipitation and retention. Along with uric acid diathesis mention may be made to the condition of phosphaturia; this latter condition is found in some cases of chronic gastritis and in diseases of the stomach accompanied by superacidity or supersecretion.

INFLUENCE ON THE HEART AND CIRCULATION.

Under this heading let us bear in mind the close relation between the stomach and the heart, both by reason of close proximity and nerve supply—the first disturbs by reason of mechanical compression, the second by means of pathological reflexes. Normally, digestion increases both the frequency and the strength of the heart beats, strong excitation of the mucous membrane of the stomach makes the heart's action slow. Tachycardia dependent upon gastric derangement is exceedingly rare. Bradycardia of gastric origin is more common. This condition may be associated with a weak heart. Cardiac palpitation is often associated with gastric disturbance. Acute diseases of the stomach, or even the exacerbation of chronic diseases, may so disturb cardiac compensation as to deal a death blow in organic heart diseases as well as to precipitate an attack of angina pectoris.

INFLUENCE ON THE NERVOUS SYSTEM.

The period of normal digestion is one of rest, mental and physical. This restful state may be disturbed or even prevented by the use of stimulants—tea, coffee, etc. Pathological digestion acts adversely upon the nervous system, producing headache, insomnia, together with other symptoms referable to the nervous system too numerous to mention. The most common disturbances are neurasthenia, vertigo, tetany, and

epileptiform convulsions. Vertigo is a very common symptom, and with this symptom conditions of the arteries and circulation, besides those of the stomach should be called to mind. Tetany is a rare complication. Gastric epileptiform convulsions must be differentiated from true epilepsy with a gastric aura.

INFLUENCE ON THE SKIN.

The stomach through its influence on the vasomotor nerves and through the irritation produced to elimination may excite urticaria, which condition to the lay mind is due to a bad stomach. It is undoubtedly due more frequently to intestinal disturbances from anatomic lesions or the idiosyncrasy for certain forms of food. Eczema, though rare, is sometimes associated with gastric derangement, as is also rosacea.

INFLUENCE ON THE KIDNEYS.

Some diseases of the stomach directly modify the composition of urine; changes may be brought about in this organ. The total quantity of urine secreted may be markedly diminished, its acidity either lessened or increased. Its toxicity increased. The functional albuminureas are frequently closely associated with a diseased stomach; in fact, it may contain gastric ferment and albumoses.

Is Alcohol a Food?

By Dr. M. L. Holbrook.

THERE has been much discussion in the papers recently concerning the question whether alcohol is or is not a food. Professor Atwater, of Wesleyan University, has raised the question, having made a series of experiments in his laboratory which go to show that it is burned up in the body and produces heat and force. This statement has given some comfort to those who use alcohol, and thrown considerable consternation into the camp of the temperance people. I suppose it is generally admitted that at least a portion of the alcohol taken into the system is burned, and in burning produces heat. In this respect Professor Atwater has made no discovery; but does this fact entitle alcohol to be classed as one of the foods? This is the all important question. In one sense anything that we habitually eat or drink is a food, no matter what it is as, clay among some people, putrid flesh among others, but this definition is not strictly correct. In another sense, a food is any substance which builds up our tissues, nourishes our bodies and supports life. Edward Smith, who wrote largely on this subject, thus defines food: "It is a substance which supports the functions and powers of the body by which it may live, act and grow. A medicine is not a food, though it may alter the functions of the organs and to some extent increase or control their activity. *Hence a food must be identical* with the elements of our bodies, and capable of transformation into them, of supplying the want caused by waste, and the material needed for growth. It must be adapted to the infant, the aged, to all conditions of life, to the climate in which one lives, the reason, mode of life, and the bodily activities." Professor G. Bunge, another authority of still more recent date, gives a still clearer definition of a food—with special reference to alcohol. He says: "We know that alcohol is to a great extent oxidised in the body. Only a small part is excreted unchanged by the kidneys and lungs. Alcohol is therefore, without doubt, a source of energy when taken into the body. *But it does not therefore follow that it is a food.* To establish this, it must be shown that the energy liberated by the burning of alcohol is used to promote the performance of the bodily functions in a healthful manner. It is not enough that energy has been liberated, it must be liberated at the right time, in the right place and in definite parts of the tissues. Our bodies are not so constituted that they can be nourished by any and every sort of material which will burn in them."

According to these definitions a poison is not a food, though in certain quantities it may yield a limited force to the body and alter its activities. All books on toxicology define alcohol as a poison, and a poison no matter in what quantities we use it. It is not necessary here to go into the well known effects of even the moderate use of alcohol on the body and especially on the mind. They are well known. Instead of classifying it as a food it should be classified as a medi-

cine, and so poor a medicine is it that scores and hundred of physicians of high rank are using it less and less for this purpose, and many have discarded it altogether.

The Care of the Feet.

IT is a remarkable fact that few people seem to realise that the foot is worthy of or demands any special attention further than to provide some kind of a covering, which is too often an instrument of torture only.

An old physician, who has made a study of the foot one of his specialties once said: "Cranky tempers and crampy toes have been comrades ever since shoes began to be worn." The majority of people treat their feet as of absolutely no importance, when in fact there is no part of the human body more delicately and intricately constructed or more entitled to care. As a consequence, there are few feet able to perform, perfectly and painlessly, the service for which they were intended. The crowding of the slender bones and delicate muscles into a space that is too small is often the direct cause of painful disease, as well as deformity.

If a child complains of its shoe, do not delay, saying to yourself: "I guess it is nothing much," or "There is always something the matter with that child," but give it your prompt attention. I know a woman who is never free from pain, and it is often pain too great to be borne without the use of anodynes, simply as a result of neglect and abuse of the feet when a child. While romping around child-like, there came a hole in the stocking and a tiny toe was caught therein. All day she cried and fretted, but the busy mother found no time to relieve the little sufferer until bedtime, when she was surprised to find not only the hole in the stocking but a little cramped and crooked toe, much inflamed and swollen. For many weeks the little one sat in a chair, and although she is now a woman, she still suffers untold agony as a consequence of this little act of neglect.

The immediate removal of the shoe, when there is discomfort, does much to relieve the pain, and often prevents the forming of callous places, which very quickly develop into corns.

Keep the feet as clean and dry as possible, and wear only a perfectly fitted shoe, and they will do uncomplainingly the great work for which they were designed.

The Hygiene of the Bedstead.

A BEDSTEAD ought to be six feet three inches in length, and no bedstead whatever, if constructed on the principles I intend to lay down, need be more than three feet wide —save for a few unfortunate people who are on exhibition. A uniform size of bedstead, interchangeable, would be a distinct comfort in change of houses. The material must, of course, be some metal, of which the best is steel and the worst is brass. Steel or iron, with beautiful black enamel, tastefully set off with a clean counterpane, makes the prettiest bedstead in any room, be it in cottage or palace, and it gives the least trouble; but of course tastes differ in the matter of material. Both head and foot rails ought to be finished in a strong flat arch. For strength and steadiness the head rail must have four or five vertical bars fully secured into its arch and transom, so that the pillows are not pushed out by restless sleepers, whilst the arch of the foot-rail, not more than six to eight inches high should have one horizontal bar to prevent any slipping of the mattress. The head rail and upper legs are framed firmly all in one piece in my ideal bedstead, and so with the foot rail and lower legs, whilst the frame of the bedstead is a solid parallelogram and a permanent frame for the wire mattress, by far the greatest improvement in modern bedstead making. If such arrangement were carried over space indefinitely it would mean that any pressure at any point would radiate equally in all directions. But as the frame of the mattress has a length of twice its breadth, the diminished longitudinal strain is supplemented by a supply of strong spiral steel springs, which serve the additional purpose of giving a point at which detachment of the springs from their frames may be begun should it ever become necessary to remove them; or, if detached, the

process of reattachment ends there. But there never ought to arise any necessity for detaching the springs or wire meshes. The spring mesh is tightly secured all round the inside of the firm metal frame, made in one piece, so that the whole bedstead, weighing seventy pounds, and fixed together by bevel key joints or dovetails, comes into three pieces by a few smart strokes from below upwards, delivered on the dovetails on each corner, and for removals these three pieces pack on one another flat, and require only to be tied together by a piece of cord. Compare this with the awful work of removing an old fashioned four-poster!

Objections to Total Abstinence Considered.

DR. BRENFAIT has made answers to those physicians and others who have raised objections to total abstinence, and the following condensed statements give in few words his views. They naturally and appropriately follow what Prof. Atwater has told us. Dr. Brenfait puts the case as follows:

1. Does alcohol promote digestion? No; its ingestion produces a passing excitation, interrupts the proper action of the muscles of the stomach, because alcohol acts as an anæsthetic after having irritated the walls of the stomach, and its drives the blood to the skin and so hinders the action of the gastric juice.

2. Is alcohol an appetiser? No; it produces an excitation of the stomach which causes a sensation taken for hunger.

3. Is alcohol a food? No; it does not correspond to the definition of food, and the heat that it seems to produce does not serve as an actual warmth.

4. Is alcohol heating? No; it causes a flow of blood to the skin, and a lowering of temperature.

5. Is alcohol a stimulant? In no case, either physical or intellectual.

6. Is alcohol a stimulant against contagion? No; it predisposes the body to contagion.

7. Can we live without alcohol? This idea that we cannot live without alcohol is a prejudice that numerous facts contradict. Multitudes do live well without it.

8. Is alcohol good for children? It should never be given to children.

9. Does alcohol increase longevity? According to reliable statistics alcohol diminishes longevity.

How We Abuse the Stomach.

THE rush of modern civilisation leaves little time for the average man to think outside the immediate tether of his own absorbing pursuits. He is content to eat, drink, sleep and take his pleasures as they come, without encroaching upon the period of his scant recreations by such solid labour as that involved in consecutive thinking. In this way eating and drinking are regarded much as breathing or the complex nervous and muscular acts that take place in walking or talking; all are accepted as matter of course. Indeed, it is just this easy way of treating vital functions that only too often leads to their abuse. Let the reader pause for a few moments and think how he treats, and has been in the habit of treating, his own patient stomach. Does he begin the day with a heavy breakfast, including several cups of strong tea? Does he take a meat luncheon, with wine or alcoholic drink? Does he indulge in afternoon tea and wind up with a dinner of half a dozen courses, tempered with more alcohol? If a man, does he distribute odd alcoholic drinks over the whole day's programme? If of either sex, is tobacco included in the daily trial of the stomach? A steady course of public dinners would, in time, ruin the digestion of a rhinoceros or an ostrich. The three square meals a day of the average country house quickly upsets the digestion of the visitor, who is used to think highly and live plainly. Indeed, no great intellectual activity can be permanently associated with gluttony. The amount of abuse the modern civilised stomach can withstand is an eternal monument to the perfecting powers of the evolutional survival of the fittest.—*Medical Press and Circular.*

THE common house fly sounds the note F in flying. This means that its wings vibrate 355 times in a second. The honey bee sounds A, indicating 430 vibrations to the second.

SEASONABLE INFORMATION.

Useful Winter Hints.

HUMIDITY IN WINTER.

Could we but have double the moisture that we generally have in our homes in the winter, it would result in better health for the occupants and economy for the pocket-book. The dryer the atmosphere the greater is the consumption of coal, and the dryer the atmosphere the more enervating, while at the same time a greater heat is required for bodily comfort. Generally speaking, the humidity of the average living room is not more than 25 degrees when it should be more than double. A room with 25 degrees of humidity requires 72 degrees of heat, while a room with, say, 50 degrees of humidity, will be comfortable with six or eight degrees less. In the open air in summer, in the shade, a person will be comfortable with light clothing at ten degrees less temperature than in a heated room in winter, and dressed in flannels and winter apparel. The difference is because of the humidity of the atmosphere and breathing fresh air in the summer and hot and vitiated air in the winter. This illustrates the necessity for health and comfort, of fresh and moist air in our homes in the winter. Breathing copiously of fresh air not only warms the body, but invigorates it.

HANDKERCHIEFS AND DISEASE.

It is not fully appreciated by the public that the article we carry as an everyday and necessary part of our attire may become charged with elements of infection. If it were, there would be shown much more care in the use of the handkerchief and in its cleansing. Especially should this be the case in families of whom any member is troubled with a cold, influenza or otherwise. One person with a catarrhal affection may impart the trouble to an entire household. This fact should make it common practice to isolate the handkerchiefs of an individual who is affected by an "influenza." The handkerchiefs used by such a person, too, should be treated in the following manner: They should be placed under water, and there remain for, say, two or three days, then the water is to be heated—by pouring on boiling water—and when this is cool enough they may be washed, soap being used, of course. Another washing makes disinfection sure, and completely removes all stain and effect of nasal appropriation. Then rinse the handkerchiefs carefully in warm water, and if possible hang upon a line to dry in the open air. Let them remain on the line over night. When handkerchiefs are treated in this manner, disease matter is robbed of its danger, a fabric of delicate character spared the sacrifice occasioned by hard rubbing and washboard penalty, and the luxury of a soft, clean and white appliance may be had for the suffering nose, which is liable to be for a time very sensitive from the effects of "blowing and excoriation."

COLDS AND HOW TO CURE THEM.

The so-called "simple cold" is an infectious disease, and quite liable to go "through the family," attacking those of lowered vitality first.

Colds are more prevalent in badly ventilated homes and where there is worn a deficiency or excess of underclothing, and steam baths, while a delightful luxury, render one susceptible to colds, if taken frequently.

Nature provides an oily skin to protect one from sudden changes in temperature, and frequent and prolonged steam baths remove this oil. After a vapour or Turkish bath the patient should have cocoanut oil massaged into the skin and remain in bed at least two hours.

It is worth more to know how to AVOID a cold than to CURE one.

First—Have plenty of fresh air day and night.

Second—Wholesome food.

Third—Plenty of outdoor exercise.

Fourth—Keep clean, inside and out.

Fifth—Avoid people who have colds.

TO CURE A COLD.

If the patient would consult his physician upon the first symptoms of a cold (a hot sensation in the throat, so the inhaled air feels cold), it could usually be absorbed, but he generally experiments upon himself till it is deep-seated, and then wonders why the physician doesn't cut it short.

Neither whisky nor quinine can "break up a cold."

The average woman knows so little of nursing that the home-given sweat is ofttimes responsible for pneumonia; otherwise I should say, "Take a sweat and go to bed."

Take an Irishman's advice: Never face a draught with your back, and if you get a cold, consult a physician instead of your grandmother, remembering that a little cold is a stubborn thing, and may also become dangerous.

TO SUFFERERS FROM COLDS.

Almost everybody suffers with colds, especially at this season of the year, and suggested remedies are, of course, numerous enough. Probably the latest cure, which is recommended by several physicians, will hardly commend itself to those with hearty appetites, although it is simple enough. It is merely to reduce one's allowance of food.

Several doctors state that they have been trying it themselves with excellent results, and more than one has expressed the belief that a drastic reduction in the amount of food taken is an efficacious remedy for many other disorders besides colds.

The new remedy is certainly worth trying by those smitten with chills and catarrh, although it certainly reverses the old saw that one should "feed a cold."

THE APOTHEOSIS OF "FIGURE."

WOMEN talk and think of their figures with a persistency that is astounding. What will or will not suit them, whether they are increasing or decreasing in bulk, etc., yet withal they never study really and practically a subject which is of such vital importance to them. Every country has an ideal figure which is recognised as such. In most southern countries the ideal woman, says the *Birmingham Daily Mail*, is of comely proportions—which is saying "stout" prettily. She is not the least athletic, but just soft and comfortable. This is not our ideal woman. The typical English girl is erect, long-limbed, well-proportioned, and slim. She will walk with free, easy gait; she will run, ride, swim, and all with a natural ease of grace. This is our ideal type. In the evening her freedom of carriage and exquisite poise will assume a quiet dignity and repose which is restful to look upon. She is essentially of the country. I do not say that all country girls of necessity possess the ideal figure, or that town girls cannot attain it. Primarily, one must be born well proportioned, but given this the town girl has less chance of full development than the country girl. For the girl not born with the basis of the ideal figure town life is crippling. Her gait is stilted, her figure undeveloped, her muscles soft. She stoops and moves listlessly. Her recreations are visiting, tea and other parties, her exercise walking to and from these parties and shopping. A small proportion of town girls will play golf, hockey, or tennis, but the majority of them only in fits and starts. How is it possible for them to be properly developed?

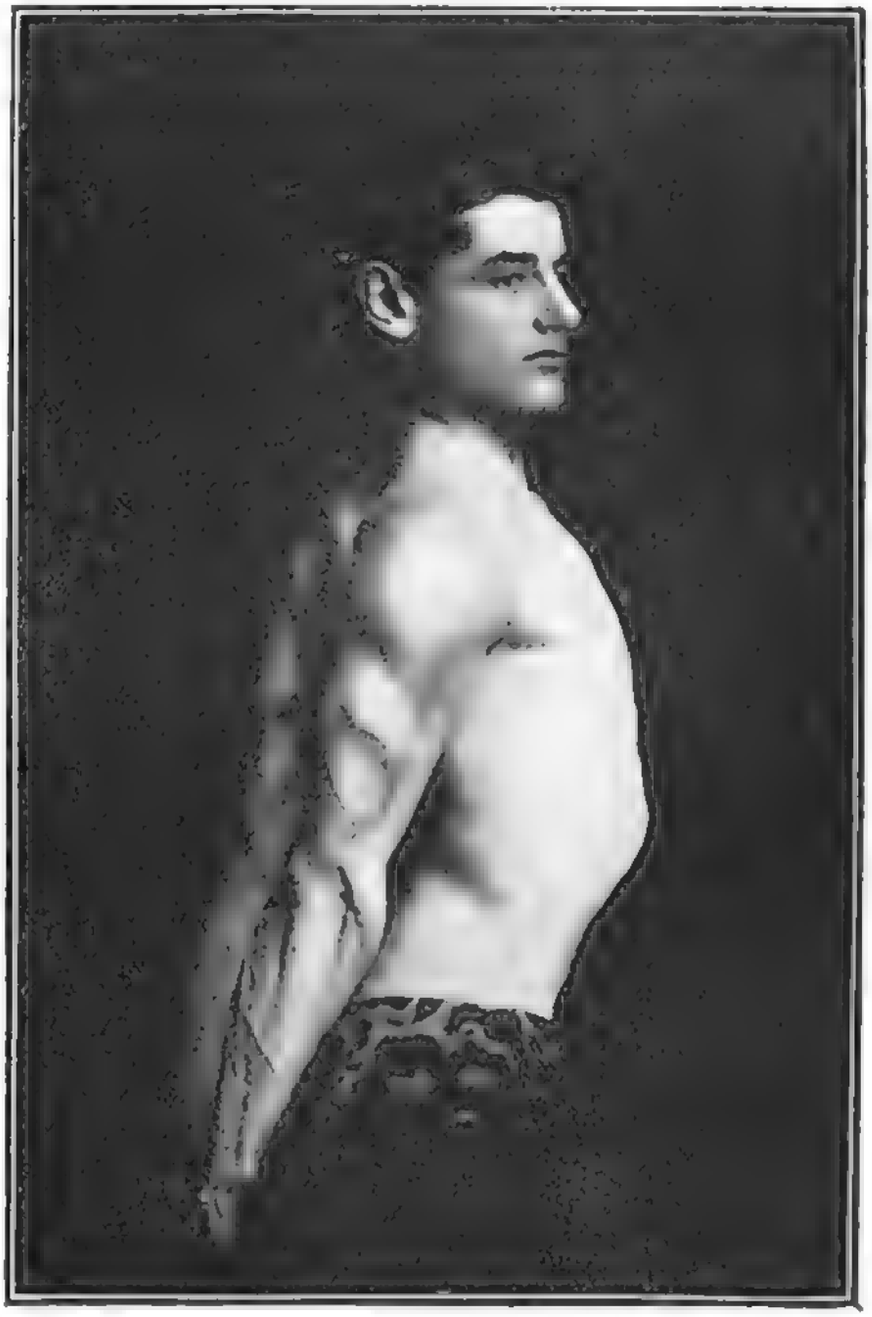
NATURE AND FASHION.

Now with the country girl it is quite easy. She must walk, she can scarcely help playing games when all the girls whom she knows are doing so. Exercise is practically thrust upon her, so that, with no effort to herself, she unconsciously develops symmetrically. We in the town think of our figures far more than do the country girls, but merely as clothes props on which to hang the latest fashions. We look at our figures critically season after season to see how near is our shape to that which fashion at the moment decrees as correct. As to how near the perfect shape we may or may not be, we never trouble ourselves. If fashion's fiat is high waists, we crush our ribs in the required spot. Should her mandate be that the limit of our waist must be eighteen inches, with Spartan adherence to her bequests we jam our vital organs one against the other till we get the desired size. If shoes are to be pointed our toes are spueezed to points, and so we go on, always utterly regardless of the ideal figure, crippling ourselves, ruining our looks and our health. For what? An answer has yet to be found to this question. It is a truth which no one can confute, that a good, well-proportioned figure developed on the lines which Nature intended will carry any girl with credit through every eccentricity of fashion which la mode may inflict upon us. Then why, instead of always aiming at a figure to suit the exigencies of each changing fashion, do we not strive only for the perfect figure, on which all fashions look well?

THE NEED OF EXERCISE.

A girl who carries herself well and walks gracefully will incite more admiration dressed in last year's clothes than a girl who, in the very latest creations of fashion, ambles, slouches, or shuffles. An easy, graceful poise, an erect figure, with the head held well, and unfettered movements of the limbs, will go further towards making our clothes look well on us than any amount of "making up," which the modiste's art may achieve. If we spent more time on the shape of

our figures, and less on the shape of our clothes, the result would be infinitely more satisfactory, and I am sure, less costly, in many different ways. It is not every town girl who has the money to go in for games even if she had the opportunity, for in this respect one has to pay for one's pleasures. I suppose that games are recognised as being the easiest forms of physical development. It is certainly much nicer to take one's exercise playing than just to do it for the sake of doing it. The majority of girls find doing the ordinary physical exercises a nuisance which they readily shirk. Yet if they would look upon it as a necessity, as they do brushing their hair or bathing, it would become a habit the performing of which they would take in the natural routine of life. All girls like to look nice, and they will go to infinite pains in their efforts to do so. If they realised that a good figure in the true sense of the word is a fundamental start, they would spare no pains until they had attained the perfection of their figure to its utmost capacity. Every girl in the kingdom can do it, be she rich or poor.



PHYSICAL CULTURE.

There are books on physical culture, and various systems, all of which are equally good in their way, and attain the same end, perhaps by slightly different methods, but always with the one object in view. Those who can afford it may buy these books, study them, and practice the exercises which they recommend. Those who cannot afford to buy them will find copies in the free library, which they can read and take notes of. The secret is to do the exercises regularly and intelligently. It is not the quantity, but the quality of your work which tells. Do not get a book and rush at the exercises, doing them all violently until you are so stiff with the unaccustomed exercises that you cannot move with ease for days. Take it slowly and quietly, a very little each day. Know why you are doing each particular exercise and which muscle you are developing. Work with your brain, as well as with your body. The majority of girls are inclined to stoop. They are hollow-chested, and in the

evening, when they put on their low-necked dresses, their collar bones stick up, and great hollows, commonly known as "salt cellars," are seen each side of them. All this can be rectified with simple easy exercises, some of which are breathing.

USE ALL THE MUSCLES.

What we want to do is to put into regular use the muscles which we have, but which, from the way we live, and from lack of opportunity, we have allowed to become flabby and soft. How can we move gracefully when we are only using one-half, if as much, of our muscles? They are all given to us for the perfect moving of each portion of our body, and if half of them lie useless we are bound to move awkwardly. Just now, when the tight fitting bodices are being worn, it is essential that we should have good figures. It did not matter what sort of a figure we had during the "floppy" era, but now we must be straight backed, with fully-developed bust and trim waist. There is no necessity to tighten in our corsets so that by making our waists smaller we give the idea of a larger bust. What we want is to straighten our backs, throw out our chests, and by so doing give our waists, by contrast, a smaller appearance. No one would dream of denying that a good figure is essential to looking nice in our clothes—then why not strive to attain it?

NECESSITY OF SLEEP.

THERE are many who will agree with a well-known doctor who declares that half of the ailments of children arise from insufficient sleep. He recognises that the same difficulty exists in the case of adults, and in a recent conversation upon the subject said: "It is not only children, but adults, that are falling into nervous insanity from this cause. They live too fast, and it affects people of all ages. St. Vitus' dance, which is one of the most wearing of diseases, is the consequence of lack of sleep, although it is often wrongly ascribed to lack of proper nourishment. Children live in such a rush that they are worn out before they arrive at maturity."

No girl who does not sleep well can hope to preserve her good looks. Six hours' sleep is necessary for everyone, but is not sufficient to meet the physical needs of all, some requiring eight hours, and others even longer. When possible, at least one hour's sleep should be obtained before midnight, as this is worth all the hours that succeed it.

What is the Relation Between Stature and Genius?

Evidence Produced to Disprove Napoleon's Theory that Short Men are the More Intellectual.

WHAT is the height of genius? How do its physical inches correspond with its altitude of mind and soul? These questions are a subject of curious inquiry with the Boston *Herald*.

Napoleon the Great, a short man, surrounded himself with a staff of short men. He did not care to look like a pigmy among his subordinates. Doubtless vanity contributed to his preference for few inches. He said of General Kléber: "He has all the qualities and defects of a tall man."

Napoleon would not only have agreed with Lombroso that great men are short men, but he went further than that; he altered the stature of Frederick the Great, of Alexander, of Cæsar, to suit himself. He always insisted that they were short men, but the chroniclers of their times tell us otherwise.

The chroniclers of Napoleon's time seem to have been struck by his own fancy, for they made him as short as they conveniently could. His old friend Bourrienne wrote Napoleon's height as five feet two inches. Constant put it at five feet one inch. But, after all, these were old French measures.

Captain Maitland's testimony is more to the point. It was to Captain Maitland that Napoleon surrendered on board the "Bellerophon." Maitland measured him and recorded the fallen conqueror's height as five feet seven inches, English. That, by the way, is half an inch more than the stature of Lord Roberts.

THE TEST OF FIGURES.

But the Napoleonic theory does not bear the test of figures. Intellectual power in its varied manifestations is not found at its utmost strength in small men only. It takes men as it finds them—tall and short, thin and plump—and it seems to rather like height.

Thackeray was six feet four inches. So was Fielding. Scott, Walt Whitman, and Tennyson were six footers. Goethe, the elder Dumas, Robert Burns, and Longfellow were five feet ten inches.

J. M. Barrie is only five feet five inches, and Kipling only five feet six inches. Edwin A. Abbey has the same height as Barrie; so has Alma-Tadema.

Lord Curzon is six feet one inch, George Westinghouse is over six feet two inches, Andrew Carnegie is five feet four and a half inches. President Roosevelt is five feet nine inches. Mr. Gladstone was five feet nine inches, and Sir Henry Irving was an inch taller.

Edmund Burke and Oliver Cromwell were five feet ten and a half inches, which, by the way, is the height of the present Prime Minister of England, Sir Henry Campbell-Bannerman. Wellington was half an inch taller than Napoleon.

That trio of great admirals—Nelson, Blake, and Sydney Smith—were a little under five feet six inches. Bismarck was a tall man, but not so tall as George Washington, who was six feet three inches. Sargent, the great painter, is six feet; Carlyle, Darwin, Huxley, and Ruskin were six-footers.

Disraeli and Dickens were five feet nine inches, which is also the stature of Sir William Crookes. Sir Oliver Lodge is six feet three inches, Marconi five feet ten and a half inches.

Emerson, Haus Andersen, Wordsworth, Bunyan, Audubon, Corot, Moltke, Millet, Gounod, Lord Clive, and Lord Brougham were tall men. So were Humboldt and Helmholtz. Lord Kelvin is five feet seven inches, Lord Reay six feet two inches. Conan Doyle is six feet one inch, Anthony Hope three inches shorter. All these figures give the stature of the men in their boots.

King Edward is five feet eight and a half inches, the Kaiser just an inch shorter. The Mikado is five feet six inches, the King of Italy five feet two inches. The Czar's height is the same as the Kaiser's. Leopold, King of the Belgians, is six feet five inches.

AMERICANS TALLER THAN ENGLISHMEN.

Peter the Great was six feet eight and a half inches. Abraham Lincoln was just under six feet two inches, Sir Walter Raleigh and Sir Richard Burton six feet. Alfred de Musset, Froude, Puvis de Chavannes, Poussin, Lessing, Schiller, Lamartine, and Sterne were tall men. W. S. Gilbert is over six feet.

It would be possible to lengthen this list to the point of tediousness. But the more the subject is examined, the farther away we get from the Napoleonic theory. Nature has a pretty wide range in these matters, and she makes the most of it.

When it comes to averages, figures prepared by the anthropometric committee of the British Association for the Advancement of Science indicate that the average stature of the male adults of England is five feet seven inches and seven-eighths, although the professional and commercial classes show "a mean height of from two to three inches above this, and the labouring classes an inch or two below." The Scotch and Irish are a little taller, and the Welsh a little shorter than the English.

Unworthy Thoughts do Injury by Weakening Brain Centres.

By G. Elliot Flint. Author "Power and Health through Progressive Exercise."

A TIME was when the brutal instincts ruled absolutely. Animals killed and were killed. They fought to overcome; they fought to defend, and they fought to possess females. Everywhere went on the process of natural selection or the suvival of the fittest. Then man was evolved. At first, much like the animals, he fought as they did. Wars between tribes were chronic. But steadily, though slowly, the human brain developed. It began to speculate and thought vaguely of a future life. Still man remained brutal, as is attested by the hecatombs of victims sacrificed to his religion. Gradually, however, after the family and the home had become established, his thoughts grew less bloody and were directed to higher things; and then began to develope his nobler faculties.

Parts of the brain are developed just as parts of the body—by increasing the blood flow to those parts. With the body this is done by exercising particular muscles; it is done with the brain by the exercise of particular faculties. When we think, certain convolutions, more

than others, are suffused with blood. The painter, owing to a natural aptitude, which means simply the predominance of special faculties, thinks habitually of form and color, and he has a nice discrimination in blending. And so, because he delights in using faculties that are relatively strong rather than those which are relatively weak, he attains to marvellous skill in his profession. Should it be asked why he delights in the use of his stronger faculties, the reply is that the blood-flow through parts that are strong being greater than it is through those that are weak, there results in the strong parts a pruriency which makes them itch to act —a painter cannot help painting. The same is true of the poet and of the musician. The poet writes and the musician plays, because neither can do otherwise.

Now, few men are born to be great in anything; most of us are eternally commonplace. But there is one desire emanating from a special part of the brain that, in the vast majority of men, overtops all other desires—it is the desire to possess women. This desire is perfectly normal when regulated. But so powerful is it that to keep it within due bounds is extremely difficult. Unregulated, as it so often is, it becomes a wild, insane thing that breakes up countless homes, compels to embezzlement, murder and countless crime and leads eventually to ruin.

Obviously, then, it is an imperative duty that every man and every woman owes to humanity the duty of their own thoughts pure, and also of discouraging all impure thoughts in others.

Plays like "Sapho," "Zaza," "Mrs. Warren's Profession" and the "Kreutzer Sonata" hold spellbound vast audiences of men and women. In these plays vice is flaunted and thoughts are suggested that for shame cannot be uttered. Who can deny that the thoughts excited in the good as well as in the bad of the assembled thousands are brutal and degraded? Certainly not one viewer and listener to paraded and parodied filth can escape moral injury. "To the pure all things are pure" if the pure be fools. To be influenced by a thought it is not necessary that one should approve of what has excited it—merely to think it is sufficient.

Unworthy thoughts harm in a double way. Not only do they strengthen, by swelling with blood, the cerebral centres that the thonghts excite, but also they weaken, by depleting of blood, all other centres. This physiological principle is daily illustrated. A man steals, and thinks because he is not caught that he has escaped the consequences. But he has not. No man can possibly escape the consequences of any act. When he commits a crime the inevitable sequence is that he strengthens his brutal instincts by as much as he weakens his moral force. A man who has once stolen steals afterward more readily. He who has committed murder is very apt to repeat those crimes.

The apologists of nastiness on the stage argue that it is "realism," and that realism is art. It may be, but it is an art in which we do not wish to become proficient. They affirm also that realism, because disgusting, repels. It does, in all healthy minds, at first; but afterward, by destroying moral balance in the way shown, it inspires indifference, and it finally, when the low faculties become sufficiently developed, attracts.

Let the lid be lowered on staged stenches.

A NOBLEMAN'S TESTIMONY.

Lord Turnour, M.P., who until recently held the distinction of being the youngest Member of the House of Commons, paid a high tribute to the value of the Sandow system of physical training. His Lordship had, he said, just completed a four months' course of the Sandow system, and could testify to the great advantage of it. Unfortunately, at Eton and similar schools, too little attention was paid to physical culture, and he therefore missed the training which many other pupils had had. Just before taking up the Sandow course he had a new Yeomanry uniform made, but owing to the election found no opportunity of using it until just recently, and then he found that it would not meet by a long way. A comparison of the measurements by the tailor who made the uniform showed that the exercises had the effect of considerably increasing his measurements. That, added his Lordship, showed the practical value of the Sandow system, for it was an unheard of thing to find one's weight and girth increased after the worry and fatigue of a contested election.

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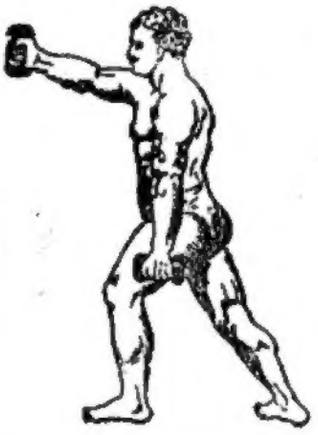

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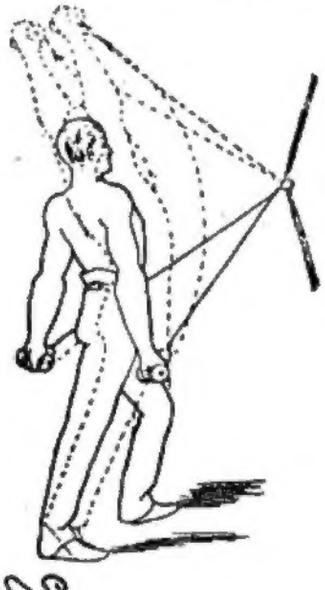

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